DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – ENGLISH (CORE)

Class : XI **Max. Marks : 80**

Date : 22.02.2020 **Time : 3 Hrs.**

GENERAL INSTRUCTIONS:

- The question paper is divided into three sections : A,B and C.
- All the sections are compulsory.
- Specific instructions, wherever necessary, are given. Follow them carefully.

SECTION A : READING SKILLS (20 Marks)

Q.1 Read the passage given below and answer the questions that follow. (8 Marks)

Endless rows of olive trees line gentle hillsides in the heart of Spain. The fruit of these trees is one of the most enjoyed gourmet products in India. Just a few kilometres away from such emblematic places as the Alhambra in Granada and the Cordoba Mosque are the seas of olive trees that flood the regions of Andalusia and Extremadura. Rich soils, a special warm and dry climate, the sun and the Mediterranean join forces to create these culinary gems. The olives are picked by hand to ensure that they are at the perfect level of ripeness for each type and without marks or blemishes. The excess bitterness is then removed and the olives are brined, allowing them to ferment fully or partially. One of the most popular methods for curing olives takes its name from the capital of Andalusia : Seville style pickling. The ties between Spain and olives are such that Spain is the leading producer and exporter of this fruit, which now reach more than 120 countries.

Spanish olives come in hundreds of flavours and more than 80 kinds of stuffings, including almonds, cheese, red pepper and anchovies. There's a flavour for everyone! The long history of olives in Spain means that each region has its own recipes using local ingredients. Garlic, smoked paprika, pickled vegetables or aromatic herbs accompany the marinades used with the most popular olive varieties : Manzanilla, Hojiblanca, Gordal and Carcerena. These types of olives are favoured because of their low fat content and delicate flavour. In fact, olives contain just a third of the calories found in other processed snack foods and provide a long list of basic nutrients essential for a balanced diet.

In Spain, olives are enjoyed from breakfast to dinner, to pique the appetite, as ingredients in classic Mediterranean recipes, to elevate haute cuisine creations ,or as a snack between meals. Spanish olives have the advantage of being deli product with an excellent quality/price ratio that pairs just as well with a glass of wine as a soft drink since olives combine the four basic flavours : salty, sweet, sour and bitter. Olives have an extraordinary flavour profile and culinary potential ; because of this, they have been introduced as an exotic ingredient in all manner of recipes from around the world, giving each recipe a modern touch. At the same time, olives blend perfectly with even the most traditional Indian cuisines. Each time you bite into a table olive you not only get to enjoy its unbeatable flavour and texture, but also get to taste a hint of the essence of Spain.

(a) On the basis of your reading of the passage make notes on it using headings and sub headings. Use recognizable abbreviations (wherever necessary–minimum four) and an appropriate format. Also, supply a suitable title to it. **(5)**

(b) Write a summary of the passage in about 80 words. **(3)**

Q.2. Read the following passage given below and answer the questions that follow: (12 Marks)

One of the modern world's intriguing sources of mystery has been aeroplanes vanishing in mid-flight. One of the most famous of these was the disappearance in 1937 of a pioneer woman aviator, Amelia Earhart. On the second last stage of an attempted round the world flight, she had radioed her position as she and her navigator searched desperately for their destination, a tiny island in the Pacific. The plane never arrived at Howland Island. Did it crash and sink after running out of fuel? It had been a long haul from New Guinea, a twenty hour flight covering some four thousand kilometres. Did Earhart have enough fuel to set down on some other island on her radioed course? Or did she end up somewhere else altogether?

Contd...2

Seventy years after Earhart's disappearance, 'myth busters' continue to search for her. She was the best-known American woman pilot in the world. People were tracking her flight with great interest when, suddenly, she vanished into thin air.

Earhart, the reserved tomboy from Kansas who disappeared three weeks shy of her 40th birthday, still grips the public imagination. Her disappearance has been the subject of at least fifty books, countless magazine and newspaper articles, and TV documentaries. There are currently two main theories about Amelia Earhart's fate.

There were reports of distress calls from the Phoenix Islands made on Earhart's radio frequency for days after she vanished. Some say the plane could have broadcast only if it were on land, not in the water. The Coast Guard and later the Navy, believing the distress calls were real, adjusted their searches and the newspapers at the time reported Earhart and her navigator were marooned on an island. No-one was able to trace the calls at the time, so whether Earhart was on land in the Phoenix Islands or there was a hoaxer in the Phoenix Islands using her radio remains a mystery. Others dismiss the radio calls as bogus and insist that Earhart and her navigator were ditched in the water.

An Earhart researcher, Elgen Long, claims that Earhart's airplane ran out of gas within fifty-two miles of the island and is sitting somewhere in a 6,000-square-mile area, at a depth of 17,000 feet. At that depth, the fuselage would still be in shiny, pristine condition if ever anyone were able to locate it. It would not even be covered in a layer of silt. Those who subscribe to this explanation claim that fuel calculations, radio calls and other considerations all show that the plane plunged into the sea somewhere off Howland Island.

(a) On the basis of the reading of your above passage, answer the following questions by choosing the correct option. **(1x6=6)**

(i) Amelia Earhart's nationality was:
(a) English (b) American (c) Australian (d) South African

(ii) A word from the passage which means"unspoilt" is …….. .
(a) Shiny (b) silt (c) plunged (d) pristine

(iii) The most convincing evidence that Amelia crashed somewhere on land was ……
(a) The findings of the aircraft remains
(b) The sightings by islanders
(c) Distress signals from the Phoenix Islands on Earhart's radio frequency
(d) All of the above

(iv) Earhart's researcher,Elgen Long claimed that ……
(a) There was a hoaxer using radio.
(b) Earhart was on land ,in the Phoenix island.
(c) Earhart was captured by the Japanese.
(d) Earhart's plane ran out of gas and plunged into the sea.

(v) The news of distress calls from the Phoenix islands made the newspapers report that…….
(a) Earhart's plane was hijacked .
(b) Earhart and her navigator were stranded on an island.
(c) Earhart's plane plunged into the Pacific.
(d) Earhart assumed name as a housewife in New Jersey.

(vi) A word that can replace' shy' in 'three weeks shy of her 40th birthday' is ……
(a) More (b) short (c) extended (d) felt

b. Answer the following questions, briefly. **(1x6=6)**

(i) At which stage did Earhart radio her position last?
(ii) How old was Earhart ,when she disappeared?
(iii) Where was Earhart's plane supposed to arrive?
(iv) What was Earhart's disappearance a subject of ?
(v) The word ……. from the paragraph 4 is a synonym of the word 'false'.
(vi) The word ……. from the paragraph 5 means 'the main body of an aircraft'.

Contd…3

SECTION B : WRITING AND GRAMMAR (30 Marks)

Q.3 You are Neeti / Nitin. You are a Chartered Accountant with an experience of 10 years. You need a full time job. Draft, in 50 words, an advertisement to be published under Classified columns of a newspaper, giving particulars of qualification, experience, salary acceptable etc. (Word limit : 50 words) **(4)**

OR

Design a poster to inform the public about a blood donation camp to be organised in Apollo Hospital, Nehru Nagar, Bhilai on 22 February 2020 from 10 a.m. to 5 p.m. to collect blood for the hospital's blood bank. You are the Director of the Hospital. (Word limit : 50 words)

Q.4 You are Aditi / Aditya. You are an alumnus of A.P. Public School. After your college education, you wish to join Cambridge University for your Post Graduation. In view of this, you need to submit a letter of recommendation from any of your teachers .Write an application to the Principal of your school requesting her/him to help you get the recommendation letter, as early as possible, to facilitate the admission in to the University. (Word limit 120-150 words) **(6)**

OR

You are Ambika / Aman, the librarian of Laxman Public School, Bilaspur. Your library needs several copies of Oxford concise dictionaries and illustrated children's encyclopaedias for the school library. Write a letter to Time life publishers, Delhi enquiring about the availability of the same and also the discount and mode of payment. Your letter should be in about 120 to 150 words.

Q.5 As a regular commuter by bus from Noida to Delhi, you have been witnessing rash driving by the bus driver daily without an exception. Write a letter to the Editor, Times of India, Delhi, drawing the attention of the General Manager, Delhi Transport Corporation, to this problem. You are Prithi / Priyesh, Udyog Vihar, Noida. (Word limit : 120-150 words) **(6)**

OR

Bal Vidya Public School, Bhilai, urgently requires a post-graduate teacher to teach political science for which they have placed an advertisement in The Bhilai Express. You are Sanjay / Sanjana Sharma from 21, Vasant Marg, Bhilai. Draft a letter including your bio data, applying for the advertised post. (120 – 150 words)

Q.6 You are Priya/Piyush. You find illiteracy as the biggest impediment to the development of our nation and believe that education plays a very important role in the progress of our country. Using this idea, write an article on 'Education-The biggest tool of Progress'. (Word limit: 150-200 words) **(8)**

OR

You are Anisha / Anish, the head girl/boy of APS Public School. You were asked to write a report for the school magazine, on the inauguration of an Indoor Swimming pool, recently constructed in your school. Write the report in about 150-200 words.

Q.7 The following passage has not been edited. There is one error in each line. Write the incorrect word and the correction in your answer sheet as given below, against the correct blank number. The first one has been done as an example, **(½ x4=2)**

		INCORRECT	**CORRECTION**
Swimming has several benefits, who	e.g.	who	which
make it score over the other form of	(a)	.....	.....
physical activity. Since the body have to	(b)	.....	.....
be kept straight while swimming, they	(c)	.....	.....
strengthens the muscles of a spinal cord.	(d)	.....	.....

Q.8 Change the voice of the following. **(Any two)** **(1x2=2)**

a. The small boy acquired fame overnight.
b. Who bakes the cakes in Satyam Bakery?
c. The ball is being kicked by the football player.

Contd...4

Q.9 Rearrange the following words/phrases to form meaningful sentences. **(1x2=2)**

e.g. relative of/but has /is the/the fennec/smallest relative/the dog/the biggest ears

The fennec is the smallest relative of the dog, but has the biggest ears.

(a) live/the Sahara,/these/in/charming/the hottest/animals/place/the earth /on

(b) hide/in the deep/the fennecs/themselves/and cool/the blistering sun/burrows/to avoid

SECTION – C : LITERATURE (30 Marks)

Q.10 Read the following extract.

Then with eerie delicate whistle –chirrup whisperings
She launches away, towards the infinite
And the laburnum subsides to empty.

Answer **any two** of the following: **(1x2=2)**

(a) Name the poet.

(b) Why is it said that the laburnum subsides to empty?

(c) To where does 'she' launch away?

OR

Yet have I killed
The seed I spent or sown it where
The land is his and none of mine?

Answer **any two** of the following:

(a) Name the poet.

(b) What does the phrase 'the seed I spent 'mean?

(c) Explain the poetic device used in the given lines.

Q.11 Answer **any five** of the following questions in about 30 words each. **(2x5=10)**

(a) How was the melon crowned to be the new king of the country?

(b) Describe briefly, Taplow's view about Crocker Harris?

(c) Who were the two crewmen taken by the narrator for the round-the –world voyage and why?

(d) Describe any two functions of the rain, as mentioned in 'The voice of the rain'?

(e) Why was Howard Carter's investigation about Tutankhamun resented?

(f) What do you get to know about the Tibetan mastiffs through 'The Silk Road'?

Q.12 Answer **any one** of the following questions in about 120 to 150 words. **(06)**

What are the earth's four principal biological systems?Describe how they have become depleted?

OR

Describe Professor Gangadhar Pant's experience in the Azad Maidan.

Q.13 Answer **any one** of the following questions in about 120 to 150 words. **(06)**

Describe 'Outsider Art'.What is Nek Chand's contribution to it?

OR

Describe the grandmother in 'The Portrait of a lady'.

Q.14 Answer **any one** of the following questions in about 120 to 150 words. **(06)**

What impressions of Shahid do you get from 'The Ghat of the only World'?

OR

How does the narrator help Ranga to get married?

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – MATHEMATICS

Class : XI **Max. Marks : 80**

Date : 25.02.2020 **Time : 3 Hrs.**

General Instructions:

(i) All questions are compulsory.

(ii) The question paper contains 36 questions divided into four sections A,B, C and D.
Section A consists of 20 questions of one mark each,
Section B consists of 6 questions of two marks each,
Section C consists of 6 questions of four marks each and
Section D consists of 4 questions of six marks each.

(iii) All questions in section A are to be answered in one word, one sentence or as per the exact requirement of question.

(iv) There is no overall choice. However, internal choices have been provided in two questions of one mark each, two questions of two marks each, two questions of four marks each and two questions of six marks each. You have to attempt only one of the alternatives in all such questions.

SECTION—A

1. Which of the following statements is false
(a) $A - B = A \cap B'$ (b) $A - B = A - (A \cap B)$
(c) $A - B = A - B'$ (d) $A - B = (A \cup B) - B$

2. If A and B are two given sets, then $A \cap (A \cap B)'$ is equal to
(a) A (b) B (c) $\emptyset$ (d) $A \cap B'$

3. If $A = \{x: x \text{ is a multiple of } 3\}$, $B = \{x: x \text{ is a multiple of } 5\}$ then $A - B$ is
(a) $A \cap B$ (b) $A \cap B'$ (c) $A' \cap B'$ (d) $(A \cap B)'$

4. If $R = \{(x, y): x, y \in Z, x^2 + y^2 \leq 4\}$is relation on Z, then domain of R is
(a) $\{0,1,2\}$ (b) $\{-2,-1,0\}$ (c) $\{-2,-1,0,1,2\}$ (d) None of these

5. The range of the function $f(x) = \frac{x}{|x|}$, $(x \neq 0)$, is
(a) $R - \{0\}$ (b) $R - \{-1,1\}$ (c) $\{-1,1\}$ (d) none of these

6. Which of the following is correct?
(a) $\sin 1° > \sin 1$ (b) $\sin 1° < \sin 1$ (c) $\sin 1° = \sin 1$ (d) $\sin 1° = \frac{\pi}{180} \sin 1$

7. If R be a relation on a finite set having n elements, then number of relations on A is
(a) 2^n (b) 2^{n^2} (c) n^2 (d) n^n

8. Let R be a relation on N defined by $x + 2y = 8$.The domain of R is
(a) $\{2,4,8\}$ (b) $\{2,4,6,8\}$ (c) $\{2,4,6\}$ (d) $\{1,2,3,\}$

9. The argument of of $\frac{1-i}{1+i}$ is
(a) $-\frac{\pi}{2}$ (b) $\frac{\pi}{2}$ (c) $\frac{3\pi}{2}$ (d) $\frac{5\pi}{2}$

10. If x is a real number and $|x| < 5$, then
(a) $x \geq 5$ (b) $-5 < x < 5$ (c) $x \leq -5$ (d) $-5 \leq x \leq 5$

11. The number of permutations of n different things taking r at a time when 3 particular things are to be included is
(a) ${}^{n-3}P_{r-3}$ (b) ${}^{n-3}P_r$ (c) ${}^{n}P_{r-3}$ (d) $r!\,{}^{n-3}P_{r-3}$

12. Which one of the following is not a function
(a) $\{(x, y): x, y \in R, x^2 = y\}$ (b) $\{(x, y): x, y \in R, y^2 = x\}$
(c) $\{(x, y): x, y \in R, x = y^3\}$ (d) $\{(x, y): x, y \in R, x^3 = y\}$

13. If ${}^{m}C_1 = {}^{n}C_2$
(a) $2m = n$ (b) $2m = n(n + 1)$ (c) $2m = n(n - 1)$ (d) $2n = m(m - 1)$

OR

If a, b,c are in A.P. and x, y, z are in G.P. then $x^{b-c} y^{c-a} z^{a-b}$ is
(a) 0 (b) 1 (c) xyz (d) $x^a y^b z^c$

14. Evaluate $\lim_{x \to -1} \left(\frac{x+1}{x^3+1}\right)$

Contd…2

15. Write contra positive and converse of the given statement **:** x is an even number implies that x is divisible by 4
16. Write the converse of the statement:If two integer a and b are such that $a > b$, then $a - b$ is always positive integer
17. Find the slope of the line $\cos 30°x + \sin 30°y + 2 = 0$

OR

The total number of terms in the expansion of $(x + a)^{100} + (x - a)^{100}$ is
(a) 202 (b) 51 (c) 50 (d) none of these

18. Find distance between the lines $2x + y + 6 = 0$ *and* $4x + 2y + 14 = 0$
19. Find the centre of circle $2x^2 + 2y^2 - 4x + 6y = 8$
20. Find the eccentricity of the ellipse $\frac{x^2}{16} + \frac{y^2}{36} = 1$

SECTION—B

21. Prove that ${}^nC_r : {}^{n-1}C_{r-1} = \frac{n}{r}$ **OR** Find the value of n if, ${}^{n-1}P_3 : {}^nP_4 = 1:9$
22. Find the value of $tan\ \frac{\pi}{8}$
23. Solve the trigonometric equation for x; $sec^2 2x = 1 - \tan 2x$
24. Find the derivative of $cos(x + 2)$by first principle.
25. If $y = \sqrt{\frac{1+\sin x}{1-\sin x}}$, then find $\frac{dy}{dx}$
26. Reduce the equation $\sqrt{3}\,x + y - 8 = 0$ into normal form.

OR

Find the distance of the point $(-1,2)$ from the line $2x + 3y - 6 = 0$

SECTION—C

27. Using the properties of set only prove that $(A - B) \cup (B - A) = (A \cup B) - (A \cap B)$

OR

Find the domain and range of the function, $f(x) = \sqrt{4 - x^2}$

28. If α and β are different complex numbers with $|\beta| = 1$, then find $\left|\frac{\beta-\alpha}{1-\bar{\alpha}\beta}\right|$
29. Using Principle of Mathematical Induction, prove that $x^{2n} - y^{2n}$ is divisible by $x + y$
30. Solve the following inequalities and show the common solution on number line ;
$5(2x - 7) \leq 3\,(2x + 3),\ 2x + 19 \leq 6x + 17$
31. Find the equation of the ellipse whose major axis is on y-axis, center is at the origin and passing through the points (3,2) and (1,6)

OR

Find the equation of hyperbola whose foci are at $(0, \pm 13)$ and the conjugate axis is of length 24

32. If 4-digit numbers greater than 5000 are randomly formed from the digits 0,1,3,5and 7, what is the probability of forming a number divisible by 5 (i) If digits are repeated (ii) If digits are not repeated.

SECTION—D

33. Prove that $\cos x + \cos y + \cos(x + y + z) = 4\cos\left(\frac{x+y}{2}\right)\cos\left(\frac{y+z}{2}\right)\cos\left(\frac{z+x}{2}\right)$

OR

Solve for $Sin\ x + Sin\ 2x + Sin\ 3x + Sin\ 4x = 0$

34. Show that the middle term in the expansion of $(1 + x)^{2n}$ is $\frac{1.3.5\ldots.(2n-1)}{n!} . 2^n . x^n$
35. Find the sum of the series: $\frac{1^3}{1} + \frac{1^3+2^3}{1+3} + \frac{1^3+2^3+3^3}{1+3+5} + \cdots n$ terms:
36. Calculate the mean, variance and standard deviation for the following distribution:

Class	30 - 40	40 – 50	50 - 60	60 – 70	70 - 80	80 - 90	90 - 100
Frequency	3	7	12	15	8	3	2

OR

The Arithmetic Mean and Standard Deviation of100 items was recorded as 40 and 5.1 respectively. Later on it was discovered that one observation 40 was wrongly copied down as 50.What was the correct mean and standard deviation

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – PHYSICS

Class : XI **Max. Marks : 70**

Date : 06.03.2020 **Time : 3 Hrs.**

General Instructions:

- All questions are compulsory.
- Section A contains 20 questions of one mark each.
  Section B contains 7 questions of two marks each.
  Section C contains 7 questions of three marks each.
  Section D contains 3 questions of five marks each.
- Internal choices have been provided in 2 questions of one mark, 2 questions of two marks , 1 question of three marks and 3 questions of 5 marks.
- Use of calculator is not permitted.

SECTION – A

(Q.1 TO Q.10) Select the most appropriate option from those given below each question:

01. The displacement of a body is given to be proportional to the cube of time elapsed. The body is undergoing **(01)**
(a) uniform acceleration **(b)** uniform retardation **(c)** non-uniform acceleration **(d)** zero acceleration

02. Two vectors $\vec{A}$ and $\vec{B}$ are such that $|\vec{A} + \vec{B}| = |\vec{A} - \vec{B}|$. The angle between the vectors $\vec{A}$ and $\vec{B}$ is **(01)**
(a) 0^0 **(b)** 60^0 **(c)** 90^0 **(d)** 180^0

03. A gramaphone record is revolving with an angular velocity ω. A coin is placed at a distance r from the centre of the record. The static coefficient of friction is μ. The coin will revolve with the record if **(01)**
(a) $r = \mu g\omega^2$ **(b)** $r < \frac{\omega^2}{\mu g}$ **(c)** $r \leq \frac{\mu g}{\omega^2}$ **(d)** $r \geq \frac{\mu g}{\omega^2}$

04. In pure rotation, all particles of the body **(01)**
(a) move in a straight line **(b)** move in concentric circles
(c) move in non-concentric circles **(d)** have same speed.

05. If V_e and V_p denote the escape velocity from the earth and another planet having twice the radius and the same mean density as the earth, then **(01)**
(a) $V_e=V_p$ (b) $V_e = V_p/2$ (c) $V_e = 2V_p$ (d) $V_e=V_p/4$

06. Which law is used to find the temperature of the surface of the Sun? **(01)**
(a) Stefan's Law **(b)** Wien's Law **(c)** Kirchoff's Law **(d)** Newton's Law

07. Water waves produced by a motor boat sailing in water are **(01)**
(a) neither longitudinal nor transverse **(b)** both longitudinal and transverse
(c) only longitudinal **(d)** only transverse

08. Springs A and B are identical except that A is stiffer than B. They are stretched by the same force. The work done by the springs W_A and W_B are related as **(01)**
(a) $W_A = W_B$ (b) $W_A>W_B$ (c) $W_A<W_B$ (d) $W_A \geq W_B$

09. The ratio of the specific heats $^{C_P}/_{C_V} = \gamma$ in terms of degrees of freedom (f) is given by **(01)**
(a) $1 + \frac{1}{f}$ **(b)** $1 + \frac{3}{f}$ **(c)** $3 + \frac{1}{f}$ **(d)** $1 + \frac{2}{f}$

10. All real gases approach the behaviour of ideal gas at **(01)**
(a) low pressure and high temperatures **(b)** high pressure and low temperatures
(c) low pressure and low temperatures **(d)** high pressure and high temperatures

Contd...2

(Q.11-Q.16) Fill in the blanks with appropriate answer:

11. A physical quantity x is calculated from $x = \frac{ab^2}{\sqrt{c}}$. % error in measuring a,b,c are 4, 2 and 3 respectively, the % error in x is …… . **(01)**

12. A vehicle taking a circular turn on a level road. If μ is the coefficient of friction between tyres and road, then the maximum velocity with which the vehicle can safely take a circular turn of radius r is given by …… . **(01)**

13. A uniform circular motion is an example of …… motion. **(01)**

14. S.I. unit of specific heat is …… . **(01)**

OR

Specific heat of a substance at the melting point becomes …… .

15. The ratio of most probable speed, average speed and rms speed of gas molecules is …… . **(01)**

(Q. 16 – Q.20) Answer the following

16. Under what condition can a position-time $(x - t)$ graph have a negative slope? **(01)**

17. A periodic time of a body executing simple harmonic motion is 3s. After how much interval from time t=0, its displacement will be half of its amplitude? **(01)**

18. Why spokes are provided in a bicycle wheel? **(01)**

OR

Why are we not able to rotate a wheel by pulling or pushing along its radius?

19. The direction of the oblique projectile becomes horizontal at the maximum height. What is the cause of it? **(01)**

20. An elevator of total mass (elevator + passenger) 1800 kg is moving up with a constant speed of 2 m/s. A frictional force of 4000 N opposes its motion. Determine the minimum power delivered by the motor to the elevator. ($g=10ms^{-2}$) **(01)**

SECTION – B

21. Critical velocity of a viscous liquid flowing through a capillary tube depends upon radius of the tube, density and coefficient of viscosity of the liquid. Deduce the formula dimensionally. **(02)**

22. A jet airplane travelling at the speed of 500 kmh^{-1} ejects its products of combustion at the speed of 1500kmh^{-1} relative to the jet plane. What is the speed of the later with respect to observer on the ground. **(02)**

OR

A body travels 200 cm in first two seconds and 220 cm in next four seconds. What will be the velocity at the end of the seventh seconds from the start?

23. From a uniform disc of radius R, a circular section of radius R/2 is cut out. The centre of the hole is R/2 from the centre of the original disc. Locate the centre of mass of the resulting flat body? **(02)**

24. Discuss the variation of acceleration due to gravity with depth. What will be the value of 'g' at the centre of the earth? **(02)**

25. A Carnot engine whose heat sink is at 27^0 C has an efficiency of 40%. By how many degrees should the temperature of source be changed to increase the efficiency by 10% of the original efficiency? **(02)**

26 (a) State theorem of parallel axes for the moment of inertia of a body.
(b) Find the radius of gyration of a thin ring about a tangent to the circle in the plane of the ring. **(02)**

OR

(a) State perpendicular axis theorem for the moment of inertia of a body.
(b) Find the radius of gyration of a thin rod of length L about an axis perpendicular to it through one end.

27 (a) State law of equipartition of energy. **(02)**
(b) When the temperature of a gas increases by 2^0 C at constant volume, its pressure increases 0.4%. Find the initial temperature of the gas.

Contd…3

SECTION – C

28. Show that motion executed by the bob of the simple pendulum is S.H.M. Derive an expression for its frequency. **(03)**

29. Derive an expression for the work done during the isothermal expansion of an ideal gas. **(03)**

OR

Derive an expression for the work done during the adiabatic expansion of an ideal gas.

30 (a) What will happen to the potential energy of the atoms of a solid when **(i)** compressed **(ii)** on stretching a wire? Explain **(03)**

(b) Find the greatest length of copper wire, that can hang without breaking. Breaking stress = 7.2×10^7 N/m^2 , density of copper is 7.2 g/c.c, g=10 ms^{-2}.

31. State parallelogram law of vector addition. **(03)**

Determine a unit vector which is perpendicular to both $\vec{A} = 2\hat{\imath} + \hat{\jmath} + \hat{k}$ and $\vec{B} = \hat{\imath} - \hat{\jmath} + 2\hat{k}$.

32. Define orbital velocity of a satellite. Derive expressions for the orbital velocity and time period of a satellite. **(03)**

33. Differentiate between elastic and inelastic collision (one point). Show that in case of one dimensional elastic collision of two bodies, the relative velocity of separation after collision is equal to the relative velocity of approach before the collision. **(03)**

34. A projectile is fired with a velocity u making an angle θ with the horizontal. Derive expressions for **(i)** maximum height and **(ii)** horizontal range. **(03)**

SECTION – D

35 (a) Define angle of repose. Deduce its relation with co-efficient of Static friction. **(2+1+2=05)**

(b) Why are wheel of an automobile made circular?

(c) A conveyor belt is moving at a constant speed of 2m/s. A box is gently dropped on it. The coefficient of friction between them is μ = 0.5. Find the distance that the box will move relative to belt before coming to rest on it. (g=10ms^{-2}).

OR

(a) Obtain an expression for the maximum speed with which a vehicle can safely negotiate a curved road banked at an angle θ. The coefficient of friction between the wheels and road is μ.

(b) Find the angle of banding so as to minimize the wear and tear of the tyres of a care negotiating a banked curve.

(c) A balloon with mass M is descending down an acceleration a, where a<g. What mass m of its contents must be removed so that it starts moving up with acceleration a?

36 (a) Explain capillarity and deduce ascent formula. **(3+2=05)**

(b) Find the work done in blowing a soap bubble of surface tension 0.06 Nm^{-1} from 2 cm radius to 5 cm radius.

OR

(a) Define streamline flow. Write two limitations of Bernoulli's theorem.

(b) In a test experiment on a model aeroplane in a wind tunnel, the flow speeds on the upper and lower surfaces of the wing are 70 ms^{-1} and 63 ms^{-1} respectively. What is the lift on the wing if its area is 2.5 m^2? Take the density of air is 1.3 kgm^{-3}.

37 (a) Explain Newton's formula for velocity of sound in air and hence discuss Lapace's correction. Draw graph showing the variation of velocity of sound (V) in a gas with the pressure (P) at constant temperature.

(b) Two engines pass each other in opposite directions with a velocity of 60 km h^{-1} each. One of them is emitting a note of frequency 540 Hz. Calculate the frequency heard in the other engine before they have passed each other. (Given velocity of sound = 316.67 ms^{-1}) **(3+2=05)**

OR

(a) What are stationary waves? Show that in case of closed organ pipe the first three harmonics are in the ratio 1:3:5.

(b) A train stands at a platform blowing a whistle of frequency 400 Hz in still air. What is the frequency of the whistle heard by a man running towards the engine at 10ms^{-1}. (Take velocity of sound in air = 340 m/s.)

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – CHEMISTRY

Class : XI **Max. Marks : 70**

Date : 03.03.2020 **Time : 3 Hrs.**

General Instructions :

- **All questions are compulsory.**
- **This question paper divided in 4 sections A, B, C & D.**
  Section A : Q.No. 1 to 20 are very short answer questions and carry 1 mark each.
  Section B : Q. No. 21 to 27 are short answer questions and carry 2 marks each.
  Section C : Q.No. 28 to 34 are long answer questions and carry 3 marks each.
  Section D : Q.No. 35 to 37 are also long answer questions and carry 5 marks each.
- **There is no over all choice. However an internal choice has been provided in two questions of two marks, two questions of three marks and all the three questions of five marks weightage.**
- **You have to attempt only one of the choices in such questions.**
- **Use log table if necessary, use of calculators is not allowed.**

SECTION – A

Read the following passage and answer the questions 1 to 4 that follow :

Real gas shows deviations from Ideal behaviour. The extent of deviation is measured in terms of compressibility factor Z. It is found that gases which can be liquefied easily show larger deviations. All real gas shows ideal behaviour at very low pressure and high temperature. For every gas there is a particular temperature above which they show ideal behaviour over an appreciable range of pressure. This temperature is called Boyle temperature. A plot of compressibility factor verses pressure for gases A, B, C and D and for the same gas at different temperature T_1, T_2 and T_3 are given below in FIG-I and FIG-II respectively. Answer the following questions:

01. The compressibility factor is given by the expression Z= _____ . **(01)**

02. The gas which can be liquidefied the most easily is **(01)**
(a) A (b) B (c) C (d) D

03. In the fig. I the gas which is above Boyle temperature is **(01)**
(a) A (b) B (c) C (d) D

04. In the fig. II the correct order of the temperature is **(01)**
(a) $T_1<T_2<T_3$ (b) $T_1>T_2>T_3$ (c) $T_3>T_1>T_2$ (d) $T_2>T_1>T_3$

Question No. 5 to 16 are to be answer in one word or one sentence.

05. If one atom of an element weight $1.8 \times 10^{-22} g$, what is the atomic mass? **(01)**

06. Suggest giving reason which substance of the following pair likely to have higher boiling point
(a) HF (b) HCl **(01)**

07. Write the IUPAC name of the following compound. **(01)**
CH_3-CH_2-C≡C-CH=CH_2

08. For the reaction 2Cl (g) → Cl_2(g), what is the sign of ΔH and ΔS ? **(01)**

09. Write all four quantum numbers for the 19th electron in Sc (Z=21) **(01)**

10. What do you understand by Ozone hole? **(01)**

11. Which is more stable? Cl-CH_2-CH_2-O^- or CH_3CH_2-O^-. Why? **(01)**

Contd...2

12. How many subshell are associated with n=4? How many electrons will be present in the subshells having $S = {}^{-1}/_{2}$ for $n = 4$. **(01)**

13. Which out of NH_3 or NF_3 has higher dipole moment? Give reason to support your answer. **(01)**

14. What type of Redox reaction that the following reaction belong:

Cl_2 (aq) + $20H^-$(aq) $\rightarrow Cl^-$(aq) + ClO^-(aq) + $H_2O(l)$ **(01)**

15. The equilibrium constant expression for a gas reaction is $Kc = \frac{[NH_3]^4\,[O_2]^5}{[NO]^4[H_2O]^6}$.

Write the balanced equation corresponding to the expression. **(01)**

16. Justify that the following reaction is a redox reaction **(01)**

Fe_2O_3 (s) + 3CO(g)→ 2Fe(s) + $3CO_2$(g)

In the Questions 17 to 20 a statement of Assertion (A) is given followed by a corresponding statement of Reason (R) just below it of the statement, mark the correct answer as.

A. If both assertion and reason are true, and reason is the true explanation of assertion
B. If both assertion and reason are true, but reason is not true explanation of the assertion.
C. If assertion is true but reason are false.
D. If both assertion and reason are false.

17. Assertion : The first ionisation enthalpy of aluminium is lower than Magnesium. **(01)**
Reason : Ionic radius of aluminium is smaller than that of Magnesium.

18. Assertion : F has less negative electron gain enthalpy than Cl. **(01)**
Reason : Additional electrons are repelled more in 3P electron of Cl than 2P electrons of F.

19. Assertion : F^-, Ne and Na^+ are isoelectronic species. **(01)**
Reason : Iso electronic species have same number of electron.

20. Assertion : Size of noble gases are highest in each period. **(01)**
Reason : Noble gases are chemically unreactive.

SECTION – B

21. (a) What is the shape of the orbital with value of $l = 2\ and\ m = 0$. **(01)**

(b) The atomic number of an element X is 26. How many electrons are present in the M shell of the element in its X^{3+} state. **(01)**

22. Density of a gas is found to be 10.92 g dm^{-3} at 27^0C and 4 bar pressure. What will be its density at STP. **(02)**

23. A mixture of 3.00 mol of N_2, 2.0 mol of H_2 and 0.5 mol of NH_3 is introduced in to a 1 L reaction vessel at 500K. At this temperature the equilibrium constant for the reaction $N_2(g)+3H_2(g) \rightleftharpoons 2NH_3(g)$ is $1.7x10^{-2}$. Is the reaction mixture at equilibrium? If not what is the direction of the net reaction. **(02)**

OR

At 473K equilibrium constant Kc for the decomposition of phosphorus pentachloride PCl_5 is $5x10^{-3}$. If the decomposition is depicted by $PCl_5(g) \rightleftharpoons PCl_3(g)+Cl_2(g)$, ΔH^0=124 KJ/mol

(a) What is the value of Kc for the reverse reaction at the same temperature? **(01)**

(b) What would be effect on Kc (i) if pressure increased (ii) temperature increased **(01)**

24. The increasing order of reactivity among group-1 elements is $Li < Na < K < Rb < Cs$ where as that among group -17 elements is $F > Cl > Br > I$. Explain. **(02)**

25. From the following compound identify the pairs of chain Isomers, position Isomers, metamers and functional Isomers. **(02)**

(i) $CH_3CH_2CH_2CH_2OH$

(ii) CH_3-CH_2-CH(OH)-CH_3

(iii) CH_3-C(CH_3)(OH)-CH_3

(iv) CH_3 CH_2-O-CH_2-CH_3

(v) CH_3-CH(CH_3)-CH_2-OH

(vi) CH_3-O-CH_2-CH_2-CH_3

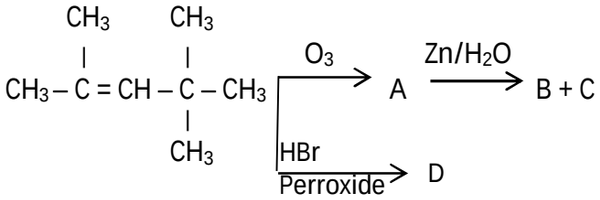
Contd...3

26. (a) Comment on the thermodynamic stability of NO given that **(01)**

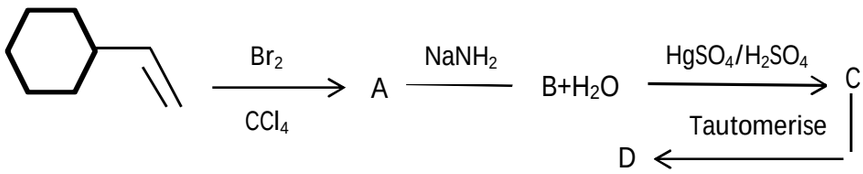
$$^1/_2 N_{2(g)} + {}^1/_2 O_{2(g)} \rightarrow NO_{(g)} \Delta H^0 = 90 KJ/mol$$
$$NO_{(g)} + {}^1/_2 O_{2(g)} \rightarrow NO_{2(g)}\ \Delta H^0 = -74 KJ/mol$$

(b) A reaction A+B → C+D+q is found to have positive entropy. The reaction will be
(a) Possible at high temperature (b) possible at low temperature
(c) not possible at any temperature (d) possible at any temperature **(01)**

27. Complete the following reaction **(02)**



OR



SECTION – C

28. Consider the reaction

$MgCO_3$ (s) + 2HCl (aq) ⟶ $MgCl_2$ (aq) + CO_2(g) + H_2O (l)

What mass $MgCl_2$ will be formed when 250ml of 0.76M HCl reacts with 1000g $MgCO_3$? Name the limiting reactant. (Molar mass of $MgCO_3$ = 84, $MgCl_2$ =95 and HCl=36.5) **(03)**

29. (a) The body of mass X Kg is moving with a velocity 100 ms^{-1}. If de-Brogile wave length is 6.62×10^{-35} m, calculate the mass X. **(01)**

(b) If the position of the electron is measured with an accuracy of $\pm$ 0.002nm, calculate the uncertainty in the momentum of the electron. **(02)**

30. (a) Arrange the following in the increasing order of hyper conjugation:
$(CH_3)_3 – C –$, $CH_3 –$, $CH_3CH_2 –$, $(CH_3)_2 –CH –$ **(01)**

(b) Draw the resonance structures of $C_6H_5NO_2$ by showing the movement of electron by curved arrows. **(01)**

(c) Identify the most stable species in the following anions $\bar{C}H_3$, $\bar{C}H_2Cl$, $\bar{C}HCl_2$, $\bar{C}Cl_3$
Give reason. **(01)**

OR

(a) Why it is necessary of an organic compound is fused with metallic, sodium for testing nitrogen, sulphur and halogen etc. **(01)**

(b) Draw the newman projection of eclipsed and staggered conformers of ethane. Which among the conformers is stable and why? **(02)**

31. (a) Name a gas causing Acid rain. Give one significant harmful effect of acid rain. **(01)**

(b) Write two differences between photochemical smog and classical smog. **(02)**

32. (a) Permanganate ion react with bromide ion in basic medium to give manganese dioxide and bromate ion by the reaction

MnO_4^- (aq) + Br^- (aq) ⟶ MnO_2 + BrO_3^-

Balance the above equation using ion electron method or oxidation no method. **(02)**

(b) Consider the reaction

H_3PO_2 (aq) + 4 $AgNO_3$ (aq) + 2H_2O (l) ⟶ H_3PO_4 (aq) + 4 Ag (s) + 4HNO_3

Identify the oxidizing agent and reducing agent in the above reaction. **(01)**

Contd...4

33. (a) Derive the relationship between ΔH and ΔU for the following reaction
$C(graphite) + \frac{1}{2} O_2(g) \longrightarrow CO(g)$ at 298 K and 1 atm **(01)**

(b) If ΔH for the above reaction – 26.4 KJ/mol, Calculate ΔU at the same temperature. **(02)**

OR

A sample of 4.5 g of methane occupies 12.7L at 310 K. Calculate

(a) the work done when gas expand isothermally against a constant pressure of 200 atm until the volume has increased by 3.31 L ($1\ Latm = 1.01 \times 10^2 J$) **(01)**

(b) the work done, if the same above expansion occurred isothermally reversibly (2)
(log 1.26 = 0.1004) **(02)**

34. Explain the industrial applications of hydrogen depend on

(a) heat liberated when its atoms are made to combine on the surface of metals like Pt or Ni. **(01)**

(b) Its effect on the unsaturated organic system presence of catalyst like Ni or Pt. **(01)**

(c) Its ability to combine with nitrogen under specific conditions of temperature and pressure. **(01)**
Write the chemical equations to support your answers.

SECTION – D

35. (a) What is meant by the term bond order. Calculate the bond order of O_2, O_2^-, O_2^+ and O_2^{2-} **(03)**

(b) Compare the relative stability of the above species. **(01)**

(c) What is the magnetic behaviour shown by O_2 and O_2^{2-} **(01)**

OR

(a) Explain the hybridisation of P in PCl_5. What are the bonds angle of P-Cl in PCl_5. Why are axial bonds in PCl_5 is longer as compare to equatorial bond. **(03)**

(b) Predict the shape of H_2S and PH_3 using VSEPR Theory. **(01)**

(c) Although geometry of H_2O and NH_3 are distorted tetrahedral why H_2O has lower bond angle than NH_3. **(01)**

36. (a) Derive the relationship between Kc and Kp . **(02)**

(b) Find Kc for the equilibrium $2NOCl_{(g)} \rightleftharpoons 2NO_{(g)} + Cl_{2(g)}$ given Kp is 1.8×10^{-2} at 500K **(02)**

(c) State Lewis concept of Acid and base. Identify the Lewis acid in the following **(01)**
(i) H_2O (ii) BF_3 (iii) NH_4^+

OR

(a) Find the conjugate acid-base for the following species. (i) HCO_3^- (ii) HS^- **(01)**

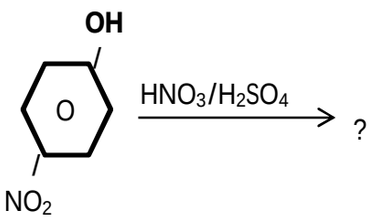
(b) State common ion effect. Explain common ion effect in group-2 during qualitative analysis of an inorganic salt. **(02)**

(c) Calculate the PH of a sample of soft dring having hydrogen ion concentration 3.8×10^{-3} M. **(02)**
(log 3.8=0.58)

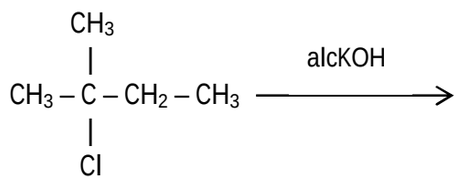
37. (a) Write the structure of the main products for the following reactions. **(03)**

(i) $3\ CH \equiv CH \xrightarrow{\text{Red hot tube}} ?$

(ii)



(iii)



(b) Write the mechanism of addition HBr on CH_3-CH=CH_2 **(02)**

OR

(a) Carry on the following conversions **(01)**
Isopropyl Bromide to 1-bromo propane

(b) Write the reagents required for the following reaction (i) Sodium benzoate to benzene **(01)**

(c) Write a brief note on Friedal crafts reaction. **(01)**

(d) Explain the mechanism of Chlorination of benzene. **(02)**

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – BIOLOGY

Class : XI **Max. Marks : 70**

Date : 28.02.2020 **Time : 3 Hrs.**

GENERAL INSTRUCTIONS:

- There are a total of 27 questions and five sections in the question paper. All questions are compulsory.
- **Section A** contains question numbers 1 to 5, multiple choice questions of one mark each.
  Section B contains question numbers 6 to 12, short answer type I question of two marks each.
  Section C contains question numbers 13 to 21, short answer type II questions of three marks each.
  Section D contains question numbers 22 to 24, case-based short answer type questions of three marks each.
  Section E contains question numbers 25 to 27, long answer type questions of five marks each.
- There is no overall choice in the question paper. However, internal choices are provided in two questions of one mark, one question of two marks, two questions of three marks and all three questions of five marks. An examinee is to attempt any one the questions out of the two given in the question paper with the same question number.

SECTION – A

Q.01 Hepato-pancretic duct opens into the duodenum and carries
(a) Bile (b) Pancreatic juice (c) Both bile and pancreatic juice (d) Saliva

OR **(01)**

Naked cytoplasm, multinucleated and saprophytic are the characteristics of
(a) Monera (b) Protista (c) Fungi (d) Slime moulds

Q.02 Holdfast, stipe and frond constitutes the plant body in case of
(a) Rhodophyceae (b) Chlorophyceae (c) Phaeophyceac (d) All of the above

OR **(01)**

Which one of the following statements is incorrect?
(a) Mesoglea is present in between ectoderm and endoderm in Obelia.
(b) Exhibits radial symmentry-Asterias
(c) Fasciola is a Pseudocoelomate animal
(d) Taenia is a triploblastic animal

Q.03 The most abundant component of living organisms is **(01)**
(a) Protein (b) Water (c) Sugar (d) Nucleic acid

Q.04 In which stage of meiotic division centromere divides **(01)**
(a) Anaphase I (b) Anaphase II (c) Both a and b (d) Metaphase II

Q.05 Wisdom teeth are **(01)**
(a) Last premolars (b) Last molars (c) Canines (d) Incisors

SECTION – B

Q.06 Longer the loop of Henle, more concentrated or hypertonic is the urine. Justify. **(02)**

OR

Fill in the blanks at (A), (B), (C), (D), (E) and (F) and complete the flow chart

JG cells release (A), when there is fall in (B), or Low availability of water in the body

↓

The released chemical converts (C) in the blood to Angiotensin I and then to Angiotensin II

↓

Angiotensin II increases the blood pressure by constriction of (D)

↓

Angiotensin II also activates adrenal cortex to release (E)

↓

It causes reabsorption of Na^+ and water causing rise in (F)

Contd...2

Q.07 What are chordae tendinae? Why are veins provided with valves along their length? **(02)**

Q.08 Sarcolemma, sarcoplasm and sarcoplasmic reticulum refer to a particular type of cell in our body. What is this cell and what parts of that cell do these names refer to? **(02)**

Q.09 Mention the criteria used for classifying Kingdom Fungi into classes. **(02)**

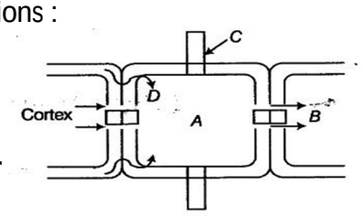
Q.10 (a) Which class of chordates possesses sucking and circular mouth without jaws? **(02)**
(b) What is the role of radula in mollusca?

Q.11 Define oxygen dissociation curve. Can you suggest any reason for its sigmoidal pattern? **(02)**

Q.12 In the figure some parts of alimentary canal of cockroach are shown. **(02)**
Name the organs A, B and C.
State the function of each of these organs.

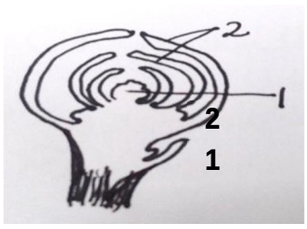
SECTION – C

Q.13 Observe the diagram given and answer the following questions : **(03)**



(a) Name the cell A and B
(b) Identify C and name the substance it is made of.
(c) Name the pathway of water movement represented as D.

Q.14



(a) Label the diagram **(03)**
(b) Which part of the dicot plant is this?
(c) If we remove part 1 from the plant, what will happen? Why?

OR

Abscissic Acid is a stress hormone. Justify giving any three physiological effects.

Q.15 Indicate the following steps in Kreb's cycle: **(03)**
(a) Two Decarboxylation
(b) FADH production

Q.16 If you uproot any Legume/pulse plant before its flowering, you can see some spherical out growths, called nodules, on the roots. **(03)**
(a) What is the pink colour of the nodule due to?
(b) Why is the pigment named so?
(c) What is the function of the pigment mentioned above?
(d) How many ATP molecules are used in the reduction of one molecule of nitrogen?

Q.17 (a) Name the structural unit of hearing and the membrane on which it is located. **(03)**
(B) Differentiate between blind spot and yellow spot.

Q.18 (a) Represent the Zwitterionic form of amino acids. **(03)**
(b) What is meant by Km value in enzyme reaction? What does it indicate?

Q.19 (i) What is a centrosome? Why is it called so? **(03)**
(ii) What is meant by (9+2) organisation of axonemal microtubules?

Q.20 Describe the modification of stems in:
Chrysanthemum, Eichhornia, Jasmine

OR **(03)**

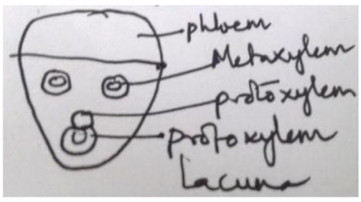
Represent diagrammatically the following:
(a) twisted and imbricate aestivation
(b) alternate and opposite phyllotaxy
(c) pinnately compound leaf and palmately compound leaf.

Q.21 Draw a labelled diagram of the T.S. of human gut. **(03)**

Contd...3

SECTION – D

Q.22 The vascular system in plants is composed of complex tissues. Answer the following with reference to the vascular bundle given in the diagram **(03)**



(a) How are xylem vessels arranged? Give the technical term.

(b) Are they called closed or open? Why?

(c) Where do you find such a vascular bundle. Name the type.

Q.23 Two of the three products of light reaction, ATP and NADPH are used to drive the biosynthetic/dark phase. Immediately after light becomes unavailable, the biosynthetic phase continues for some time and then stops; if light becomes available again, the process continues **(03)**

(a) What is the third product of light reaction?

(b) Can we say that calling the biosynthetic phase, dark reaction a misnomer? Justify.

(c) Give any two features of Kranz anatomy.

Q.24 A process is occurring throughout the day in 'X' organism. Cells are participating in this process. During the process, ATP, CO_2 and water are formed. It is not a light-dependent process. **(03)**

(a) Name the process.

(b) Is it a catabolic or an anabolic process? If so, name the process.

(c) What could be the raw material of this process?

SECTION – E

Q.25 Name the three layers in the Adrenal Cortex. Highlight the funcitons of the homones produced by the adrenal cortex.

OR **(05)**

Explain the polarisation and depolarisation of the membrane of a nerve fibre.

Q.26 (a) Give a diagrammatic representation of ETS.

(b) Oxygen is critical for aerobic respiration. Explain its role with respect to ETS.

OR **(05)**

Which is more common in plants -
Cyclic or non-cyclic photophosphorylation? Describe the above process.
Why is this process called so?

Q.27 (a) Arrange the following in the sequence in which you would find them in a plant starting from the periphery:

Pericycle, Epidermis, Pith, Endodermis, Cortex

(b) Give one basic functional difference between phellogen and phelloderm

(c) Write two differences between

(i) Protoxylem and metaxylem
(ii) Heart wood and sapwood
(iii) Parenchyma and sclerenchyma

OR **(05)**

Name the stages and type of cell division represented in (a) and (b) respectively.

Give any three distinct features of the above two stages shown in (a) and (b)

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – BIOTECHNOLOGY

Class : XI **Max. Marks : 70**

Date : 25.02.2020 **Time : 3 Hrs.**

GENERAL INSTRUCTIONS:

- Question paper consists of four sections : A, B, C and D.
- Questions 1 to 10 carry 1 mark each.
- Questions 11 to 17 carry two marks each.
- Questions 18 to 24 carry three marks each.
- Questions 25 to 28 carry five marks each.

SECTION – A

Q.01 What are the two unusual bases found in tRNA? **(01)**

Q.02 Which amino acid is responsible for the production of plant growth factor auxin in plants? **(01)**

Q.03 How does penicillin destroy bacteria that infect host organisms? **(01)**

Q.04 Name the first scientist to demonstrate linkage between genes in Drosophilia. **(01)**

Q.05 Name the natural inducer for lac operon. **(01)**

Q.06 Plants produce secondary metabolites for defence against pathogen. Name any four of it. **(01+01)**

Q.07 The development of embryos and seed without fertilization is called _____ . **(01)**

Q.08 Photo dimers are induced by _____ . **(01)**

Q.09 What is the use of bioremediation technology? **(01)**

OR

What are microsomes?

Q.10 Name the enzymes involved in the following :

Metabolic reactions :

Glyceraldehyde 3. Phosphate **(01)**

↓ **a**

1, 3 biphosphoglyceraldehyde **(01)**

↓ **b**

3 phosphoglycerate **(01)**

↓ **c**

2 Phosphoglycerate **(01)**

↓ **d**

PEP **(01)**

↓ **e**

Pyruvate

SECTION - B

Q.11 What is homeostatis? How is it maintained in living organism? **(02)**

Q.12 What are stem cells? What are the different types of it? **(02)**

OR

State any two differences of collenchyma and sclerenchyma.

Contd...2

Q.13 State the principle use of biosensors in rDNA technology. **(02)**

OR

Explain the use of nanotechnology in Biotechnology.

Q.14 How do human protects themselves from pathogens? **(02)**

Q.15 State the difference between linkage and crossing over? **(02)**

Q.16 The use of chemical fertilizers for agricultural purpose has disastrous consequences. How can a biotechnologist help to prevent it? **(02)**

Q.17 What are the major steps of photosynthesis?
What is the net outcome of noncyclic phosphorylation? **(02)**

SECTION – C

Q.18 Write the structure of Histidine, Tyrosine and Sucrose. **(03)**

OR

Write the structure of Cholesterol and B-D Glucose by Haworth.

Q.19 What are the properties of enzymes? Name an enzyme used in food industry. **(03)**

Q.20 Write the application of Biotechnology in the field of chemical industry, agriculture and paper industry. **(03)**

Q.21 Explain Watson and Crick model of DNA. Compare the different types of DNA. **(03)**

Q.22 Explain signal transduction with the help of diagram. **(03)**

Q.23 Explain with the help of well labelled diagram meiosis I of cell division. **(03)**

Q.24 What is mutation? Explain DNA repair mechanism with diagram. **(03)**

OR

Explain lac operon with diagram.

SECTION – D

Q.25 Explain Nitrogen cycle by flow sheet diagram. **(05)**

Q.26 What is gene interaction? Explain epistasis by taking two varieties of pea plant homozygous with AAbb (white flower) and aaBB (white flower) are crossed. **(05)**

OR

Explain extra nuclear inheritance related to defect in chloroplast DNA.

Q.27 Write any five functions of lysosomes and golgi apparatus. **(05)**

Q.28 Explain the process of semiconservative replication of DNA along with the enzymes involved in the process. **(05)**

OR

Explain the process of transcription and modification of mRNA before it reaches cytoplasm.

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – ENGINEERING GRAPHICS

Class : XI **Max. Marks : 70**

Date : 28.02.2020 **Time : 3 Hrs.**

GENERAL INSTRUCTIONS:

- **Attempt all questions.**
- **All dimensions are in mm.**
- **Use both side of drawing sheet, if required.**
- **Internal choice is given is some questions.**
- **Use first angle method of projection.**

Q.01 What is Dimensioning? Explain two recommended systems of placing the dimensional value. **(03)**

Q.02 Inscribe a circle in a regular pentagon whose one side is equal to 40 mm. **(03)**

Q.03 Draw the Involute of a circle whose diameter is 30 mm. **(05)**

OR

Draw the cycloid of the circle whose diameter is 40 mm.

Q.04 Define the orthographic projection, and also explain all the differences between the first angle and third angle projection method. **(03)**

Q.05 Draw the projections of the following Points : **(04)**

(a) Point 'E', 15 mm above the H.P. and 10 mm behind the V.P.

(b) Point 'F', 20 mm above H.P. and 25 mm in front of V.P.

Q.06 A straight line MN, of 30 mm length has its one end M, 10 mm from the H.P. and 15 mm from the V.P. Draw the projections of the line, if it is parallel to V.P., and inclined at 30^0 to the H.P. Assume the line to be located in each of the four quadrants by turn. Show all projections on same reference line. **(06)**

Q.07 A thin hexagonal plate of 25 mm sides is inclined at 45^0 to the H.P., and perpendicular to V.P. Two of its parallel edges are parallel to V.P., the plate is 10 mm above H.P. and 15 mm in front of V.P. Draw the projections of the plate. **(06)**

Q.08 The frustum of a cone of 45 mm base diameter and 25 mm cut face diameter, having axis 50 mm long, rests on H.P. and 20 mm in front of V.P. Such that axis is parallel to H.P., and inclined to V.P. at an angle of 30^0. Draw its projections, when the cut face is in front. **(08)**

Q.09 A triangular pyramid is resting on its base on H.P., Such that one of its base edges at the rear is parallel to V.P., Its base edge measures 35 mm and height 50 mm. A section plane inclined to V.P. at 45^0 and perpendicular to H.P., cuts the slant edge of pyramid in front at a distance of 5 mm from the axis. Draw sec. F.V. T.V. and true shape of section. **(10)**

Q.10 (i) Construct an isometric scale which can measure upto 90 mm. **(03)**

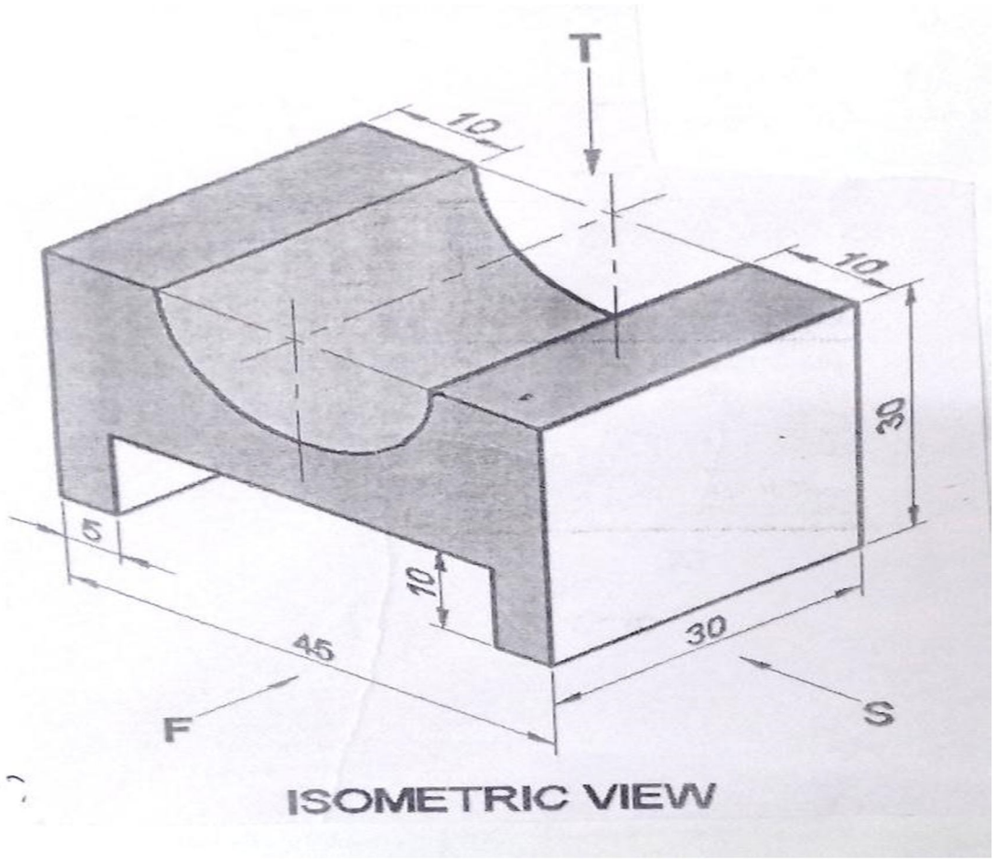
(ii) Draw the isometric projection of a regular hexagonal of base side 30 mm in V.P. keeping two of its sides parallel to H.P. **(04)**

(iii) Draw the isometric projection of a circle of a diameter 40 mm in H.P., by using four-centre method. **(04)**

Q.11 Draw the development of a square pyramid of base edge 40 mm and height 65 mm, it is resting on H.P. such that axis is perpendicular to H.P. & parallel to V.P., & two of the edges of its base are parallel to V.P. **(06)**

Contd...2

Q.12 Draw the Front view, top view and side view of the given machine block. **(05)**



ISOMETRIC VIEW

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – COMPUTER SCIENCE

Class : XI **Max. Marks : 70**

Date : 28.02.2020 **Time : 3 Hrs.**

General Instructions:

- All questions are compulsory
- Programming language Python.

Q.01 (a) Python is a Free and Open source language. What do you understand by this feature? **(01)**

(b) What will be the output of the following code? **(01)**

```
print ("My", "Name", "is", "Amit", sep = '...')
```

(c) Identify the types of following literals? **(02)**

(i) True (ii) 'True' (iii) OX123 (iv) O023

(d) Predict the output of following : **(02)**

```
x, y = 7, 2
x, y, x = x + 1, y + 3, x + 10
print (x, y)
```

(e) Consider the following code. What will be the final result and final data type? **(02)**

```
ch=5
db=5.0
fd=36.0
B=fd/db*ch/2
print (B)
```

(f) What will be the output of following code? Why? **(02)**

(i) 13 or len (13)

(ii) len (13) or 13

Q.02 (a) Write Python program that checks in range 1...100 and prints 'Fizz" if the number is multiple of 3 and prints "Buzz" if the number is multiple of 5. It should print "Fizz Buzz" if the number is multiple of both 3 and 5. **(03)**

(b) Write a program to print the following : (using for loop) **(02)**

```
8
8 6
8 6 4
8 6 4 2
```

(c) Write a program to take an integer input N from the user. Print N Fibonacci number. (Using while loop) **(02)**

(d) Write a program for Twisted Pig Latin. Prompt the user to enter a single word. Then from a new word by taking the first letter of the original word, moving it to the end and adding "ay". Thus "school" becomes "choolsay". **(03)**

(e) When does these exceptions occur? **(1½)**

(i) Type Error (ii) Index Error (iii) Name Error

(f) What does the following expressions evaluate to? Suppose that L is the list **(02)**

["These", ["are, "a'] , ["few", "words"] , "that", "we", "will", "use"]

(i) L [3:4] + L [1:2] **(ii)** "few" in L [2:3]

(ii) L [2] [1:] **(iv)** len (L)

(g) Write a program that input a list of numbers and shifts all the negative numbers to the left of zero, and positive number to the right f of zero, zero should also be a number in the list (don't use sort () function) **(02)**

(h) What is the length of the tuple shown below? **(½)**

```
T=((((‘a’, 1), ‘b’, ‘c’), ‘d’, 2), ‘e’, 3)
```

(i) Write a program that inputs a tuple T and prints a tuple of the lengths of the subtuple. For example if passed tuple T is **(02)**

```
((1,2), (2,4,6), (4,), (5,0,5))
```

Then it should print (2,3,1,3)

(j) Write a program that repeatedly ask the user to enter product name and prices. Store all of these in a dictionary whose keys are product names and whose values are the price. **(02)**

Contd...2

(k) Write a program to sort a list using Bubble sort. **(02)**

(l) What will the following list look after 3 passes of insertion sort algorithm? Show the list after every pass. **(03)**

16	19	11	15	10

Q.03 (a) What is application software? Why is it required? **(01)**

(b) Convert 1948. $B6_{16}$ to Binary and octal equivalents. **(02)**

(c) Add the binary number 110101 and 101111 **(01)**

(d) State & verify De-Morgan's Law using truth table. **(02)**

(e) What is cloud computing? Explain. **(01)**

(f) Draw circuit diagram of A. (B+C') **(02)**

(g) Write dual form for $(X + Y).(\bar{X} + \bar{Z})(Y + Z)$ **(01)**

Q.04 (a) Define the following terms:

(i) attribute **(ii)** primary key **(iii)** Cartesian product **(iv)** candidate key **(02)**

(b) Differentiate between DDL and DML commands. **(01)**

(c) Write SQL commands for the following on the basis of given table STUDENT: **(04)**

TABLE : STUDENT

No.	Name	Stipend	Stream	Avg. Marks	Grade	Class
1.	Karan	400.00	Medical	78.5	B	12B
2.	Divakar	450.00	Commerce	89.2	A	11C
3.	Divya	300.00	Commerce	68.6	C	12C
4.	Arun	350.00	Humanities	73.1	B	12C
5.	Sabina	500.00	Non Medical	90.6	A	11A
6.	John	400.00	Medical	75.4	B	12B
7.	Robert	250.00	Humanities	64.4	C	11A
8.	Rubina	450.00	Non Medical	88.5	A	12B

(i) Select all the Non medical stream students from STUDENT.

(ii) List the names of those students who are in class 12 sorted by stipend.

(iii) List all students sorted by AvgMrk in descending order.

(iv) Display a report, listing Name, Stipend, Stream and amount of stipend received in a year assuming that the stipend is paid every month.

(d) Give the output of the following SQL queries. **(02)**

(i) SELECT CHAR (70, 65, 67, 69);

(ii) SELECT SUBSTR ('ABCDEFG', 3, 4) "Subs";

(iii) SELECT INSTR ('CORPORATE FLOOR' , 'OR') AS Instring

(iv) SELECT TRUNCATE (15.79, 1) "TRUNCATE";

(e) Consider the lable Employee, write commands for the following: **(04)**

(i) Modify the Last_Name of id 3, to Gautam.

(ii) Delete the employee record having First_Name as Siddharth.

(iii) Add one column Email of data type VARCHAR and size 30.

(iv) Remove table Employee.

(f) Explain following terms of MongoDB: **(02)**

(i) Field **(ii)** Document **(iii)** Collection **(iv)** Database

Q.05 (a) Nivedita has recently shifted to new city and new school. She does not know many people in her new city and school. But all of a sudden, someone is posting negative, demeaning comments on her social networking profile, school site's forum etc.

She is also getting repeated mails from unknown people. Every time she goes online, she finds someone chasing her online. **(02)**

(i) What is this happening to Nivedita?

(ii) What action should she taken to stop them?

(b) Describe and explain at least four social Networking sites. **(02)**

(c) Describe and explain following Cyber crimes: **(02)**

(i) Cyber Bullying **(ii)** Cyber Stalking

(d) Virus, pharming and phising are all examples of potential Internet security issues. Explain what is meant by each of these terms? **(03)**

(e) What is anti-virus software? **(01)**

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – ECONOMICS

Class : XI **Max. Marks : 80**

Date : 28.02.2020 **Time : 3 Hrs.**

General Instructions :

- **All the questions in the section are compulsory. Marks for questions are indicated against each question.**
- **Question Numbers 1 – 10 and 18-27 are very short answer. Question carrying 1 mark each. They are required to be answered in one word or one sentence each.**
- **Question Numbers 11 – 12 and 28-29 are short answer questions carrying 3 marks each. Answer to them should not normally exceed 60-80 words each.**
- **Question Numbers 13-15 and 30-32 are also short answer questions carrying 4 marks each. Answer to them should not normally exceed 80-100 words each.**
- **Question Numbers 16-17 and 33-34 are long answer questions carrying 6 marks each. Answer to them should not normally exceed 100-150 words each.**
- **Answer should be brief and to the point and the above word limit is not applicable in case of numerical questions.**

SECTION – A (MICRO)

Q.01 The shape of PPC changes due to :–
(a) Opportunity cost (b) Marginal opportunity cost (c) Total cost (d) All of these **(01)**

Q.02 The opportunity cost arises :-
(a) When there is just one alternative (b) When there are 2 or more alternatives
(c) Either (a) or (b) (d) None of these. **(01)**

Q.03 At the point of satiety Marginal Utility is _____ . **(01)**

Q.04 As per Marshallian approach, utility is measured in terms of :-
(a) Rupees (b) Ranks (c) Utilis (d) Dollars **(01)**

Q.05 Indifference curves are always concave to the origin. (True/False) **(01)**

Q.06 Define budget line **(01)**

OR

Suppose that good A is a substitute of good B. How will an increase in price of B affect the demand curve of good A.

Q.07 How will Marginal product react, when Total Product rises at a diminishing rate? **(01)**

Q.08 What happens to MC, when AC falls?
(a) MC falls (b) MC is less than AC (c) MC is more than AC (d) MC=AC **(01)**

Q.09 AR is always equal to Price. (True/False) **(01)**

Q.10 Under which market form, firm is a price maker? **(01)**

Q.11 Explain the central problem of 'for whom to produce' with the help of an example. **(03)**

OR

Discuss the meaning of PPC through a schedule and diagram.

Q.12 Distinguish between Perfect competition and Monopoly under the given heads :-
(a) Number of Sellers (b) Nature of Product (c) Knowledge of Market conditions **(03)**

Q.13 How is consumer equilibrium achieved with the help of indifference curve approach? **(04)**

Q.14 Explain the meaning substitute goods and complementary goods with examples. **(04)**

Q.15 What are the AVC, AFC and AC of a firm? How are they related? **(04)**

OR

Draw TFC and AFC curves. Explain their shapes.

Q.16 What is revenue? Give the meaning of Average and Marginal Revenue. What happens to AR when –
(a) MR > AR (b) MR = AR (c) MR < AR **(06)**

OR

To increase the production of a good, only one input is increased while other inputs are held constant. Explain its effect on total product and marginal product with the help of diagram.

Q.17 How are equilibrium price and quantity affected when :-
(a) there is an increase in price of factor inputs.
(b) increase in demand = increase in supply. **(06)**

Contd...2

SECTION – B (STATISTICS)

Q.18 From the given activities, which activity is called non-economic activity?
(a) Service of a Doctor (b) Organising a free rolood camp.
(c) A tourist guide rendering services (d) Manufacturing Shirt **(01)**

Q.19 Ogives can be helpful in locating graphically the :-
(a) Mode (b) Mean (c) Median (d) None of these. **(01)**

Q.20 The mid-point is equal to
(a) The average of the upper and the lower class limit.
(b) The product of upper class limit and lower class limit.
(c) The ratio of the upper class limit and lower class limit.
(d) None of the above. **(01)**

Q.21 What would be the sum of deviations of individual items taken from Arithmetic Mean? **(01)**

Q.22 Find out the value of Median, where Mean = 60 and Mode = 30. **(01)**

Q.23 The _____ is a graphic method of studying dispersion. **(01)**

Q.24 Quartile deviation is the half of difference of upper quartile and lower quartile. (True/False) **(01)**

Q.25 The middle most value of a set of observation is :-
(a) Median (b) Mean (c) Mode (d) Lower quartile. **(01)**

Q.26 Second quartile is known as _____ .
(a) Median (b) Mean (c) Mode (d) Lower quartile **(01)**

Q.27 What is the formula for calculating Index Numbers by Laspeyer's Method? **(01)**

OR

_____ is the square root of the arithmetic average of the squares of the deviations measured from the mean.

Q.28 Construct a pie-diagram to represent the following data :- **(03)**

Items	Labour	Bricks	Cement	Steel	Marble	Others
Expenditure (%)	20	12	25	15	13	15

OR

Prepare histogram from the following data :-

Marks	0-10	10-20	20-30	30-60	60-80	80-90	90-100
No. of Students	5	10	4	18	4	3	9

Q.29 Briefly discuss the following terms –
(i) Class Interval (ii) Range (iii) Frequecny **(03)**

Q.30 What do you mean by census? Describe any three merits of census method. **(04)**

OR

Explain any three limitations of secondary data. What are the two main sources of collection of secondary data.

Q.31 Calculate arithmetic mean from the following data using step-deviation method. **(04)**

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	5	10	25	30	20	10

Q.32 Calculate Mode : **(04)**

C.I.	10-19	20-29	30-39	40-49	50-59	60-69	70-79
Frequency	10	12	18	30	16	6	8

Q.33 Define correlation. Write the significance. Find out Spearman's Rank correlation from the following data :- **(06)**

Marks by Judge 'A'	15	10	20	28	12	10	16	18
Marks by Judge 'B'	16	14	10	12	11	15	18	20

OR

Calculate Karl Pearson's coefficient of correlation from the following data :-

X	78	89	96	69	59	79	68	61
Y	125	137	156	112	107	136	123	108

Q.34 Find the Standard Deviation from the following data:- **(06)**

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	10	15	10	10	5

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – INFORMATICS PRACTICES

Class : XI **Max. Marks : 70**

Date : 25.02.2020 **Time : 3 Hrs.**

Q.01 (a) What is SoC? How is it different from CPU? **(02)**

OR

What is GPU? How is it useful?

(b) Write any two advantages of working in Interactive mode in Python. **(01)**

(c) Predict the output: **(02)**

```
p, q, r = 100, 200, 3000
q, p, r = r, q, r
p, r = q + 9, (r + 20)/2
print (p, q, r)
print (q, r, end = "\n")
```

(d) Predict the output: **(02)**

(i)
```
>>> a = Oo12
>>> print (a)
>>> b = = Oo78
>>> print (b)
```

(e) Print the following output using Python code (Use while loop) **(03)**

```
1:*
2:**
3.***
4.****
```

OR

Q.02 (a) Predict the output: **(02)**

```
>>> S = "Manoranjan"
>>> S. split ( 'n' )
>>> a = [ '12', '23', '34', '1', '5']
>>> b = '# '
>>> b. join (a)
```

(b) Write Python script to read a text from user and print each word on a separate line. **(03)**

OR

Write a Python program to accept a password and check its validity. A password should have atleast one upper case letter, one lower case letter and one digit.

(c) Write Python script to read any 10, integers from the user and store in the list then print only those numbers whose starting and ending digits are same. **(02)**

(d) Predict the output : **(02)**

```
L = [ 'A', 'C', 'Q', 'R', 'Z', 'U', 'V' ]
L [ 2:4 ] = [ ]
L [ 1:2 ] = [ ]
print (L)
```

(e) How to delete any value from the list? Explain with example. **(01)**

Q.03 (a) Predict the output: **(01)**

```
D = { 5 : [ 6, 7, 8 ], "P" : (1, 2, 3) }
  print (D. Keys() )
  print (D. values() )
```

Contd...2

(b) Write Python script to store name and aggregate percentage of any five students in a Dictionary then print the name and aggregate percentage of only those students who have scored between 75 and 90. **(03)**

(c) Explain the use of items() method in Dictionary. **(02)**

OR

Explain the use of get() method of Dictionary with a suitable.

(d) Define a Python function which takes input as integer and returns sum of its digits. (For example : input is 123 then output will be 6) **(03)**

(e) What are the two ways of importing function in Python? Explain which method is better? **(01)**

Q.04 (a) Name any two common data structures of Python Pandas library. **(02)**

OR

If a Python list is having integers and a numpy array is also having integers , then how are these two data structures similar or different from one another?

(b) Write Python statement to create 20 array of integers using numpy module. **(02)**

(c) Write Python statement to explain the use of arrange () function. **(02)**

OR

Explain the use of creating array with a numerical range using linespace() with suitable example.

(d) Why does the following code cause error? **(02)**

```
dfc1 = pd. DataFrame ( [2, 3, 4] )
dfc2 = pd. DataFrame ( [[2, 3, 4 ]] )
print (dfc1 == dfc2)
```

(e) Write Python code using function series() to store month's name and number of days of each month of a calendar. **(02)**

Q.05 (a) Write any two advantages of CSV file format. **(02)**

(b) Write a program that lists ItemName, Quantity and Price stored in file "data.CSV" where separator character is '#'. Read only first two records. **(02)**

(c) Write SQL command to create a basic table "emp" with the following column names: **(02)**

ecode	numeric
ename	string
ephone	numeric
dob	date

(d) What is sqlite 3 library of Python? **(02)**

OR

Write a program that lists only those records from SQL table that have marks in the range of 50-60. The table in sqlite is "new.db" and stored in folder "c:\sqlite3".

(e) How to add new record in any table? Explain with suitable command in sqlite. **(02)**

Q.06 (a) How Candidate key is different from Alternate key? Explain. **(02)**

OR

What are views in MYSQL ? How are they useful?

(b) Predict the output of the following SQL commands: **(04)**

```
Select      curdate ();
Select              char (69, 71, 78);
Select round (328.4567, 2);
Select mid ( "Python Panda", 3, 6);
Select 400 – 400 * 15/100;
```

Contd...3

(c) How to change the name of a column of any table? Explain with example. **(02)**

(d) What is the use of Indexes in MYSQL? Give example. **(02)**

Q.07 (a) What is Digital footprint? Why is it so important? **(02)**

(b) What do you understand by Incognito browsing? **(02)**

OR

Mention any four practices to ensure Confidential of Information.

(c) What is Cyber Stalking? Explain. **(02)**

OR

How Super Cookies are different from cookies used by browser?

(d) Mention any two rules which you will follow while using Social Media sites. **(02)**

(e) What are Cookies? How are they used by websites to track you? **(02)**

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – ACCOUNTANCY

Class : XI **Max. Marks : 80**

Date : 06.03.2020 **Time : 3 Hrs.**

General Instructions:

- The question paper is divided into two parts: **Part A** and **Part B.**
- Both the parts are compulsory.
- Attempt all parts of a question together.
- Make formats neatly, avoid cutting and overwriting.
- Give working notes wherever necessary.

PART – A

01. Name the branch of commerce, which keeps a record of monetary transactions in a set of books. **(01)**

02. Define "Deferred revenue expenditure" with example. **(01)**

03. If a firm receives an order for goods, it would not be included in the sales figure owing to which concept? **(01)**

04. Name the source document which is a written document drawn upon a specified banker and payable on demand. **(01)**

05. State two objectives of GST. **(01)**

06. Identify the qualitative characteristic of accounting information which is reflected when the information is free from errors. **(01)**

(a) Relevance **(b)** Reliability **(c)** Comparability **(d)** None of these

07. Which of these is not an example of current liability **(01)**

(a) Accrued Income **(b)** Out Standing **(c)** Advance Income **(d)** Bank Overdraft

08. Reserves which are generally not distributed as dividend are **(01)**

(a) Capital reserve **(b)** Secret reserve **(c)** Revenue reserve **(d)** Dividend equalisation reserve

09. The debit note issued are used to prepare **(01)**

(a) Sales return book **(b)** Purchase return book **(c)** Sales book **(d)** Purchase book

10. Trial Balance is **(01)**

(a) an account **(b)** a statement **(c)** a subsidiary book **(d)** a principal book

11. Anil, a customer had placed an order for purchase of furniture of `50,000 against which he advances `5,000. The businessman wants to record it as sale. By doing so, which of the following accounting concept will be violated? **(01)**

(a) Money Measurement Concept **(b)** Revenue Recognition Concept
(c) Going Concern Concept **(d)** Matching Concept

12. _____ basis of accounting is recognized by the Companies Act, 2013. **(01)**

13. Management concealing important financial information violates _____ principle. **(01)**

14. Accounting performs a number of functions. Explain **any three** such functions.

OR **(03)**

Explain conservatism principle and Historical Cost Principle with one example of each.

15. Pass necessary journal entries for the following transactions **(03)**

(a) Withdrawn goods for personal use (Cost `12,000 plus IGST @ 18%; Sales Price `20,000)

(b) Paid `20,000 for cement, `10,000 for timber and `5,000 as wages for the construction of building.

(c) Sold goods to Kaju of Delhi at the list price `30,000 less trade discount 10% add CGST and SGST @9% each, and allowed cash discount @5%.

Contd...2

16. Prove that accounting equation is satisfied in all the following cases: **(04)**

(i) Started business with cash `60,000 and Goods `30,000

(ii) Purchased goods for cash `40,000 and on credit `25,000

(iii) Goods costing `48,000 sold at a profit of $33\frac{1}{3}$% of cost. Three fourth payment received in cash.

(iv) Goods costing `20,000 sold at a loss of 5% out of which `10,000 received in cash.

OR

From the following ledger balance prepare trial balance:

Capital `20,8000, Rent outstanding `1420, Amount due to Nath `15,000, Drawings `2,800, Goodwill `12,000, Interest received `2,000, Discount received `1,580 Amount due from Rajdeep `26,000

17. Enter the following transactions in the Two Column Cash Book of Mr. Anand. (04)

2020		`
Jan. 1	Cash in hand	2,200
	Cash at Bank	50,000
Jan. 3	Purchased goods for `75,000	
	CGST 6%, SGST 6% payment made by cheque.	
Jan. 7	Sold goods for `40,000 IGST 12%	
	Payment received by cheque.	
Jan. 10	Received a cheque from Ashish	1,000
Jan. 12	Cheque received from Ashish endorsed to Dinesh in full settlement of his account of `1,050	
Jan. 15	Paid Life Insurance Premium of Mr. Anand `500	
Jan. 18	Received cheque from Kamal in full settlement of his account of ` 750	700
Jan. 20	Kamal cheque returned dishonoured by bank.	

OR

Enter the following transactions in the 'Journal Proper' of Mr. Sandeep.

(a) Rent not paid `1,000

(b) Goods (costing `4,000) sales price `5,000 withdrawn by Mr. Sandeep for his use.

(c) Purchase of Machine on credit for `10,000 from Global Machinery and paid installation charges `2,000

(d) Depreciation Motor Car with book value `50,000 @ 10% p.a. for one year.

18. On 23rd November, 2019, Y accepted two months bill for `75,000 drawn by X. On the due date, it was dishonoured by Y. Noting charges paid by X `600. On 31st January, 2020, Y requested X for renewal of the bill for another two months, for which X agrees, provided that interest is paid @ 15%, p.a. in cash. Make journal entries of these transactions in the books of X. **(04)**

19. Pass Journal entries to rectify the following errors which were located after preparing the Trial Balance. **(06)**

(a) The Sales Book was over cost by `5,000

(b) Credit purchases from Singh `6,000 were posted to debit of his account as `9,000.

(c) Goods returned from Rakesh ` 8,000 were recorded in Purchase Return Book.

(d) Wages paid `3,980 were recorded in the Cash Book as `3,890

(e) An amount of `2,000 due from Satish, which had been written off as a bad debts in a previous year was unexpectedly recovered and has been posted to his personal account.

(f) Rent due `1,500 has not been taken into account.

OR

Explain the different types of errors with example that are usually committed in recording business transactions?

20 (a) Mr. Ahmed finds that the bank balance of his cash book on 31 January, 2020 is `90,600 (credit) but the pass book shows difference due to the following reasons:

A post-dated cheque for `1,000 has been debited in bank column of cash book but not presented for payment. Cheque totaling `1,500 deposited in bank yet not collected. What will be the balance as per pass book?

(b) State three reasons when the Pass Book balance will be higher than the Cash Book balance. **(06)**

Contd...3

21. Amit Ltd. purchased a plant on 1 July, 2016 costing `5,00,000. It purchased another plant on 1 September, 2016 costing `3,00,000. On 31 December, 2018 the plant purchased on 1 July, 2016 got out of order and was sold for `2,15,000. Another plant was purchased to replace the same for `6,00,000 on same date. Depreciation is to be provided @ 20% p.a. according to written down method. The accounts are closed every year on 31 March.
Show the plant account for three years ending 31 March, 2019.

OR

Fill up the missing information in the Plant Account given below. Depreciation is charged @10% p.a. on Original Cost Method. **(08)**

PLANT ACCOUNT

Dr. **Cr.**

Date	Particulars	Amount in (`)	Date	Particular	Amount in (`)
2016			2017		
Oct.1	To Bank	...	March 31	By Depreciation A/c.	20,000
			March 31	By Balance c/d.	...
		...			...
2017			2018		
April 1	To ...	...	March 31	By ...	...
				By ...	...
		...			...
2018			2019		
April 1	To ...	...	March 31	By ...	...
			March 31	By ...	...
		...			...
2019			2020		
April 1	To ...	...	Jan. 1	By Bank A/c.	1,50,000
			Jan. 1	By ...	...
				By ...	...
		...			...

PART – B

22. If the opening capital is `50,000 as on April 01, 2018 and additional capital introduced `10,000 on January 01, 2019. Interest charge on capital 10% p.a. The amount of interest on capital shown in profit and loss account as on March 31, 2019 will be : **(01)**

(a) `5,250 **(b)** `6,000 **(c)** `4,000 **(d)** `3,000

23. Which of the following is correct : (01)

(a) Operating Profit = Net Profit + Direct Expenses – Non Operating Expenses.
(b) Operating Profit = Net Profit + Non Operating Expenses + Non Operating Incomes
(c) Operating Profit = Net Profit + Non Operating Expenses – Non Operating Incomes
(d) Operating Profit = Net Profit – Non Operating Expenses + Non Operating Incomes

24. Excess of ……. Over ……. represents loss sustained during the period. **(01)**

25. The user oriented programmes designed and developed for performing certain specific tasks are called…… **(01)**

26. …… is the brain of the computer. **(01)**

27. Differentiate between statement of affairs and Balance Sheet on the basis of objective? **(01)**

28. Distinguish between Capital expenditure and Revenue expenditure on the basis of nature. **(01)**

29. Mr. Rai started business with a capital of `4,00,000 on 1st October, 2018. He borrowed from his friend a sum of ` 1,00,000 @ 10% p.a. (interest paid) for business and brought further amount to capital `75,000. On March 31, 2019, his position was : **(04)**

	`
Cash	30,000
Stock	4,70,000
Debtors	3,50,000
Creditors	3,00,000

He withdrew `8,000 per month during the year. Calculate Profit or Loss for the year ended 31st March, 2019. Show your working clearly.

Contd...4

30. Calculate Gross Profit on the basis of the following information : **(04)**

Purchases	6,80,000
Return Outward	30,000
Carriage Inward	20,000
Carriage Outward	15,000
Wages	15,000

¾ of the goods are sold for ` 6,00,000

31. Explain six advantages of a computerized accounting system over a manual accounting system. **(06)**

OR

Describe the various types of accounting software along with their advantages.

32 (a) Ascertain the value of closing stock from the following: **(08)**

Opening Stock	1,20,000
Purchase during the year	9,30,000
Sales during the year	15,60,000
Rate of Gross Profit	40 % on sales

(b) Calculate the amount of gross profit, operating profit and net profit on the basis of the following balances extracted from the books of M/s. Rajiv & Son for the year ended March 31, 2019.

Opening Stock	50,000
Net Sales	11,00,000
Net Purchases	6,00,000
Direct Expenses	60,000
Administration Expenses	45,000
Selling and distribution Expenses	65,000
Loss due to Fire	20,000
Closing Stock	70,000

OR

Form the following figures prepare Trading and Profit and Loss Account for the year ended 31st March, 2019 and Balance Sheet as at that date :-

List of Accounts	`	List of Accounts	`
Stock (1st April, 2018)	75,000	Sundry Debtors	82,000
Purchases	8,00,000	Loan from X	10,000
Sales	12,00,000	Interest on X Loan	1,500
Motor Car	1,50,000	Furniture	20,000
Car Expenses	42,000	Land and Building	2,00,000
Rent	5,500	Capital	2,50,000
Salaries	35,200	Sundry Creditors	91,300
Bad Debts	1,500	Return Inwards	7,500
Provision for bad debts	8,100	Return Outwards	6,000
Commission (Cr.)	4,600	Cash in hand	16,400
Wages	1,25,000		
Insurance	8,400		

Adjustments :

(i) Commission includes ` 1600 being commission received in advance.
(ii) Write Off ` 2000 as further bad-debts and maintain bad debts provision at 5% on debtors.
(iii) Salary has been paid for 11 months.
(iv) Loan from X has been taken @18% p.a. interest.
(v) Depreciate Motor Car by 20%.
(vi) Closing Stock was valued at ` 60,000.

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – BUSINESS STUDIES

Class : XI **Max. Marks : 80**
Date : 03.03.2020 **Time : 3 Hrs.**

General Instructions:

i. **This question paper contains five sections – A, B, C, D and E.**
ii. **Section – A :** contains question 1-20 carrying 1 mark each. Answer to these questions may be given in one word or a sentence.
iii. **Section – B :** contains questions 21-25 carrying three marks each. Answers to these questions may be in about 50-75 words.
iv. **Section – C :** contains questions 26-28 carrying four marks each. Answers to these questions may be in about 120 words.
v. **Section – D :** contains questions 29-31 carrying five marks each. Answer to these questions may be in about 150 words.
vi. **Section – E :** contains questions 32-34 carrying six marks each. Answer to these questions may be in about 200 words.
vii. **Attempt all parts of a question together.**

SECTION – A

Q.01 Which of the category of industries covers oil refinery and sugar mills? **(01)**
(a) Primary **(b)** Secondary **(c)** Tertiary **(d)** Genetic

Q.02 BATA is an example of _____. **(01)**
(a) Mail Order House **(b)** Departmental Store **(c)** Chain Stores **(d)** General store

Q.03 Name the form of business organisation wherein Management tends to be oligarchic. **(01)**

Q.04 Use of ATM to withdraw money is an example of **(01)**
(a) B2B Commerce **(b)** B2C Commerce **(c)** C2C Commerce **(d)** C2B Commerce

Q.05 'Precious Ltd.' is an US based company. The company plans to tap the Indian Capital Market through its forthcoming issue of equity shares. Outline the instrument through which it can raise funds from the Indian Capital Market. **(01)**

Q.06 Give the full form of FICCI. **(01)**

Q.07 ABP Ltd. is planting trees on the roadside. Which objective is it trying to achieve? **(01)**

Q.08 What is perpetual succession? **(01)**

Q.09 RBI has been set up as which type of public enterprise? **(01)**
(a) Statutory Corporation **(b)** Departmental Undertaking
(c) Government Company **(d)** Multinational Company

Q.10 A transport company took an accident insurance policy for all its vehicles. A truck of that company carrying oranges met with an accident. Due to that accident there was no damage to the oranges. The oranges were unloaded from that truck and reloaded to another. Due to time wasted in unloading and reloading the oranges got spoiled. Will the company get compensation for loss of oranges from the insurance company or not? Which principle is related with this case? **(01)**

Q.11 Investment limit in Plant and Machinery for Micro manufacturing enterprises is _____. **(01)**

Q.12 Reconstruction of sick public sector units is taken up by **(01)**
(a) MOFA **(b)** MOU **(c)** BIFR **(d)** NRF

Q.13 Pradeep Ltd. has a slow sales turnover whereas Deepak Ltd. has a high sales turnover. Which company will require more working capital? **(01)**

Q.14 Define Bill of Lading. **(01)**

Q.15 Which of the following is not a type of Intellectual Property Right? **(01)**
(a) Trademark **(b)** Copyright **(c)** Patent **(d)** Business Incubators and Accelerators

Q.16 Why is there no burden on the company in respect of dividend payable to equity shareholders? **(01)**

Q.17 Name the certificate which enables the importer to claim tariff concessions or other exemptions on the imported goods. **(01)**

Q.18 Prafful is running a business of manufacturing invertors in Delhi. He has received an order for supply of 20 invertors from Bright Electronics in Ranchi. As the amount of payment is more than `2 lakhs. Bright Electronics decided to transfer the funds electronically from their bank account. Which service of Bank has been referred to in the above para? **(01)**

Q.19 Debenture holders are called _____ of the company. **(01)**

Q.20 Attracting talented and skilled employees is a major problem faced by small business enterprises. Why? **(01)**

Contd..2

SECTION – B

Q.21 Home Foods Pvt. Ltd. deals in grocery items of daily domestic usage. Its business is spread throughout Delhi. The Company's 20 stores are providing their services to the residents of Delhi. All the business activities of this company are done through internet. It's main activities are obtaining information about goods, receiving order of goods, making payments, receiving payments etc. The use of internet has resulted into reduced costs of business transactions. The customers can shop anytime and from anywhere. It has considerably reduced dependance on paperwork for the company.

(a) Which system of business is being followed by the company?

(b) State any two benefits of the system of business identified in (a) by quoting the lines from the above para. **(1+2)**

Q.22 Trinity Ltd. is a company which manufactures blankets. The company needs additional capital for expansion of business. So it issues 50,000 shares of the face value of `100 each. Before issuing shares the management of the company decided that they would issue such shares which will not impose any fixed financial charges. In the prospectus they mentioned that in the coming years, the company is expected to earn a big profit and as a result, the investors would be able to earn extra dividends. The company collected money from the public and company's business expanded.

Identify and explain the type of shares issued by Trinity Ltd. **(03)**

Q.23 Mr. Rishi took an Insurance Policy against his car and after three months he sold it to Mr. Akshat. The car was stolen from outside of Mr. Akshat's house. Mr. Rishi made a claim to the insurance company. His claim was rejected on the ground that Mr. Rishi was no longer owner of the car, so he has no financial loss with the loss of the car.

(a) Was Mr. Rishi right in making a claim? Give reasons.

(b) Who can claim compensation and why? **(1½x2=03)**

Q.24 The government planned to begin a Road Project. The government needed management specialists and financial help to complete it. The government contacted the private sector to fulfil this requirement. Now, this project will be completed jointly by both the public sector and private sector.

(a) Identify the form of enterprise.

(b) Give any two features of such enterprise. **(1+2=03)**

Q.25 Mr. Aditya is an Orthopaedic Surgeon in Ganga Ram Hospital and Mr. Yash, his friend is an Eye specialist who has set his own clinic. Mr. Yash's wife, Mrs. Pushpa operates her jewellery shop. Identify the activities performed by the above three. **(1x3=03)**

OR

Identify the service which is related to the following cases :-

(a) The service which helps in removing hindrance of risk.

(b) The service which helps in removing hindrance of knowledge.

(c) The service which helps in removing hindrance of place.

SECTION – C

Q.26 After passing B.Com Shenoy started his own business. He invested `2,00,000 as capital which was given to him by his father. He obtained a loan of `1,00,000 from his elder brother Gurpreet who was working as an Assistant Manager in ICICI Bank. In the first year he incurred a loss of `4,00,000 and had to pay his suppliers their outstanding bills. This created a financial problem for him and he had to take loan of `1,00,000 from ICICI Bank on the personal guarantee of his brother. He started working hard, lowered the prices and informed the customers about the qualities of goods sold by him. Because of this the sales increased and he earned a profit of `1,50,000 in the second year. **(1x4=04)**

(a) Identify the form of business organization started by Shenoy.

(b) Will his father and brother be responsible to pay back the amount to outsiders?

(c) What type of liability does Shenoy have?

(d) Explain any one feature of such form of organization.

Q.27 Explain briefly the following : **(1x4=04)**

(a) Multiple option Deposit Account **(b)** Cash Credit **(c)** Bank Draft **(d)** RTGS

OR

Explain briefly any four principles of insurance. **(04)**

Q.28 Explain the following terms:- **(2x2=04)**

(a) Boot Strapping **(b)** Angel Investment

SECTION – D

Q.29 Karan is the owner of a store in which there are a number of departments in the same building selling different types of products. Mehul is the owner of a retail organisation where same types of commodities are sold at uniform prices located all over the country. **(1+4=05)**

(a) Identify the types of organizations being discussed in the above paragraph.

(b) Give any two advantages of each type of organisation identified in (a) above.

Q.30 Difference between Private Company and Public Company on the basis of the following :

(a) Paid up Capital **(b)** Members **(c)** Minimum number of directors **(1x5=05)**

(d) Name **(e)** Index of numbers

OR

What are the formalities to be followed by a Joint Stock Company in case of Capital subscription? **(05)**

Q.31 Your firm is planning to import textile machinery from Canada. Describe the procedure involved in clearance of goods and making payment. **(05)**

OR

Explain briefly the different documents related to Import Trade. **(05)**

SECTION – E

Q.32 A seminar was held in New York on the problems of finance. Its topic was 'The Different Finance Sources available at the Global Level in the Modern Context'. 200 representatives from different countries participated in the seminar. One of the sources of finance discussed in the seminar was such through which the foreign companies could issue their securities in India. Another source of finance which created interest in everyone was the source through which money could be obtained from the investors in America and other European countries. In the final session of the seminar, the discussion took place on such a source of finance which could be used only in America.

In the above paragraph three international sources of finance were discussed. Quoting the lines identify those sources. **(2x3=06)**

Q.33 Goodwill Ltd. a renowned computer manufacturing company follows the vision of 'reaching new heights' with its people on its side only. It not only provides quality products at reasonable price but also provides various facilities to its employees for 5 years of service. It also provides computer skills to youth in remote areas free of cost.

(a) What according to you are the business ethics of the company?

(b) It is fulfilling social responsibilities towards which interest groups?

(c) What types of social responsibilities are being fulfilled above? **(2+3+1=06)**

OR

Identify the kind of social responsibility in the following statements:-

(a) A contribution to earthquake victims.

(b) Produce goods as per the needs of the society and sell them at a profit.

(c) Charity to an orphanage.

(d) It performs its responsibility to operate within the laws of the land.

(e) It is producing goods and services that society wants and sells them at a profit.

(f) Respecting the religious sentiments of all groups while promoting a product. **(1x6=06)**

Q.34 Identify and state the documents highlighted in the following statements. **(1x6=06)**

(a) This certificate specifies the origin of goods exported.

(b) This document is issued by the commanding officer of the ship to the exporter.

(c) Quotation prepared by the exporter providing information about goods.

(d) This document is the most appropriate and secure method of payment to settle international transactions.

(e) On the basis of this document customs office grants permission for export.

(f) This document is prepared by the importer and it shows the details of goods imported and is used by custom authorities to determine import duty.

OR

Explain the following terms :- **(1½ x4=06)**

(a) Shipping Order **(b)** Delivery Order **(c)** Certificate of Inspection **(d)** Indent

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – HOME SCIENCE

Class : XI **Max. Marks : 70**

Date : 25.02.2020 **Time : 3 Hrs.**

GENERAL INSTRUCTIONS:

- **The question paper consists of 33 questions divided into five sections : A, B, C, D and E.**
  Section A : contains 18 questions carry 1 mark each. (1 – 18)
  Section B : contains 5 questions carry 2 marks each. (19 – 23)
  Section C : contains 2 questions carry 3 marks each. (24 – 25)
  Section D : contains 4 questions carry 4 marks each. (26 – 29)
  Section E : contains 4 questions carry 5 marks each. (30 – 33)

SECTION – A

01. Staple fiber's best example is;
(a) Wool (b) Silk (c) Cotton (d) Nylon **(01)**

02. Which of the following materials acts as an emulsifier-
(a) Methylated spirit (b) Starch (c) borax (d) Soap **(01)**

03. The impression or impact that a house is likely to make on a person from outside is –
(a) Aspect (b) Suspect (c) Prospect (d) Privacy **(01)**

04. Write the properties of nylon under the following heads:
(a) absorbancy (b) effect of alkalies. **(01)**

05. An example of protein fibre is
(a) Acrylic (b) Polyester (c) Linen (d) None of these **(01)**

06. What is Pedesis? **(01)**

07. What is selvedge? **(01)**

08. What do you understand by SMCRE Model? **(01)**

09. Define media. **(01)**

10. While checking paralinguistics what actually do you check? **(01)**

11. What is Matrilineal family? **(01)**

12. What do you understand by family dynamics? **(01)**

13. What is affective domain of cognition? **(01)**

14. What is non formal education? **(01)**

15. What is peak load period? **(01)**

16. What do you understand by inclusive education? **(01)**

17. Savings in physical assets are productive in economic terms. (True/False) _____ . **(01)**

18. Profits from business and gifts are a form of income ? (True/False) _____ . **(01)**

Contd...2

SECTION – B

19 List four responsibilities you have towards your society. **(02)**

20. How will you remove these stains from a cotton material?
(a) Fruit stain (b) Medicine stain **(01)**

21. What is ECCE? What does this comprise? **(02)**

22. What is Human Development Index? **(02)**

23. Explain restrictive & permissive parenting. **(02)**

SECTION – C

24. Explain real income with suitable examples. **(03)**

25. What is BMI? What does this show? How can we calculate it? **(03)**

SECTION – D

26. Explain two eating disorders that may arise at adolescence. What are the serious consequences person may suffer from? **(04)**

27. How do age and gender influence communication process? **(04)**

28. What are the techniques of stain removal? **(04)**

29. What should be the features of clothes for children with special needs? **(04)**

SECTION – E

30. Explain the process of management with a suitable example. **(05)**

31. What are the food groups? Explain how food groups simplify planning of balanced meal. **(05)**

32. What do you understand by Credits? What are 4 Cs of credit? **(05)**

33. Write briefly about the principles underlying sound investments. **(05)**

DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2020
SUBJECT – PHYSICAL EDUCATION

Class : XI **Max. Marks : 70**

Date : 20.02.2020 **Time : 3 Hrs.**

GENERAL INSTRUCTIONS:

- The question paper consists of 34 questions.
- All questions are compulsory.
- Questions 1-20 carry 1 mark and are multiple choice questions.
- Questions 21 - 30 carry 3 marks and should not exceed 80-100 words.
- Question 31 - 34 carry 5 marks and should not exceed 150-200 words.

SECTION – A

Q.01 How many bones does the adult skeleton have?
(a) 213 **(b)** 211 **(c)** 200 **(d)** 206 (1)

Q.02 Extreme sports are also known as :
(a) Sprinting **(b)** Gymnastics **(c)** Adventure Sports **(d)** Archery (1)

Q.03 What is the adolescence age group?
(a) 10-19 **(b)** 7-10 **(c)** 5-10 **(d)** 13-19 (1)

Q.04 Pranayam in yoga focuses on what?
(a) Eye **(b)** Heart **(c)** Breath control **(d)** Sleep (1)

Q.05 What science studies the functioning of the human body?
(a) Physiology **(b)** Pathology **(c)** Anatomy **(d)** Microbiology (1)

Q.06 Smooth muscles are found in :
(a) Legs **(b)** Stomach **(c)** Heart **(d)** Arms (1)

Q.07 Sutra Neti makes use of what?
(a) Thread **(b)** Water **(c)** Milk **(d)** Ghee (1)

OR

_____ is also known as the voice box.
(a) Pharynx **(b)** Trachea **(c)** Larynx **(d)** Bronchus

Q.08 Fifa World Cup is associated with which sport?
(a) Hockey **(b)** Football **(c)** Cricket **(d)** Archery (1)

Q.09 Which one of the following was the founder of special Olympic game?
(a) John F. Kennedy **(b)** Eunice Kennedy Shriver **(c)** Baron de Coubertin **(d)** Sir Dorabji Tata (1)

Q.10 Which of these is not a component of physical fitness?
(a) Strength **(b)** Flexibility **(c)** Speed **(d)** Memory (1)

Q.11 On which date is the International Yoga Day celebrated every year?
(a) 15 August **(b)** 21 June **(c)** 26 January **(d)** 21 July (1)

Q.12 Which of these branches of science deals with the study of behaviour?
(a) Kinesiology **(b)** Physiology **(c)** Psychology **(d)** Anatomy (1)

OR

In WADA, D stands for _____ .
(a) Demand **(b)** Director **(c)** Doping **(d)** Development

Q.13 Basic skills in sports do not include:
(a) Running **(b)** Throwing **(c)** Catching **(d)** Coaching (1)

Q.14 When was Indian Olympic Association formed?
(a) 1920 **(b)** 1927 **(c)** 1947 **(d)** 1934 (1)

OR

Which of the following asanas resembles the pose of an eagle?
(a) Naukasana (b) Tadasana (c) Garudasana (d) Vrikshasana

Contd...2

Q.15 Which of these is not one of the classifications of bones based on shape and formation?
(a) Flat bones **(b)** Regular bones **(c)** Sesamoid bones **(d)** Short bones (1)

Q.16 Respiratory system helps in :
(a) Smelling **(b)** Breathing **(c)** Producing Sound **(d)** All of the above (1)

Q.17 Somatotype was classified by Sheldon into how many types?
(a) Four **(b)** Three **(c)** Five **(d)** Two (1)

Q.18 Objectives of adventure sports include:
(a) To increase stress **(b)** To decrease physical fitness
(c) To reduce concentration **(d)** Exposure to nature (1)

OR

An adventure sport practised on the Ganges is:
(a) Skiing **(b)** Skating **(c)** Rafting **(d)** Trekking

Q.19 The last stage of yoga is _____ .
(a) Yama **(b)** Dhyana **(c)** Samadhi **(d)** Niyama (1)

Q.20 The Olympic motto has the following words _____ .
(a) Citius **(b)** Altius **(c)** Fortius **(d)** All of the above. (1)

SECTION – B

Q.21 What is the Khelo-India Programme? (3)

OR

Write a brief note on the ancient Olympics.

Q.22 Explain any three components of wellness. (3)

Q.23 Why is yoga important in modern life? (3)

Q.24 Explain the objectives of Adventures Sports. (3)

Q.25 Write down any four functions of the circulatory system. (3)

Q.26 What are the differences between endomorphy and mesomorphy? (3)

OR

Differentiate growth and development.

Q.27 What are the problems faced by adolescents? (3)

Q.28 Enumerate the objectives of physical education and discuss any two. (3)

Q.29 Enlist any four harmful effects of substance abuse. (3)

OR

What are the main functions of the respiratory system.

Q.30 What do you mean by lifestyle? Write a brief note on healthy lifestyle. (3)

SECTION – C

Q.31 Write in brief note on the eight limbs of yoga. (5)

OR

Write a detailed paragraph on Paralympics.

Q.32 What are the components of physical fitness? Discuss in detail. (5)

Q.33 Briefly explain the role and quantities of a leader. (5)

Q.34 Discuss the importance of warming up in sports. (5)