



## TEST PAPER

### CLASS-12 APPEARING

Time Allowed : *Two Hours*

Maximum Marks : 400

#### INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. **Please note that it is the candidate's responsibility to encode and fill in the Roll Number carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/ discrepancy will render the Answer Sheet liable for rejection.**
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet. 

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4. This Test Booklet contains **100** items (questions). **Part I - Mathematics, Science** and **Part II - English, General Awareness**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.
6. **Each** item carry **four (4)** marks.
7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the invigilator **only the Answer Sheet**. You are permitted to take away with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. **Penalty for wrong answers :**  
**THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.**
  - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one (1)** mark assigned to that question will be deducted as penalty.
  - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
  - (iii) If a question is left blank i.e., no answer is given by the candidate, there will be **no penalty** for that question.

**DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO**

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**PART - I**

**MATHEMATICS**

1. Let  $R$  be a relation over the set  $N \times N$  and it is defined by  $(a, b)R(c, d) \Rightarrow a + d = b + c$ .

Then  $R$  is

- (a) Reflexive only
- (b) Symmetric only
- (c) Transitive only
- (d) An equivalence relation

2. A function  $f$  from the set of natural numbers to integers defined by

$$f(n) = \begin{cases} \frac{n-1}{2}, & \text{when } n \text{ is odd} \\ -\frac{n}{2}, & \text{when } n \text{ is even, is 2.} \end{cases}$$

- (a) One-one but not onto
- (b) Onto but not one-one
- (c) One-one and onto both
- (d) Neither one-one nor onto

3. If  $A = \begin{bmatrix} 1 & 2 & -1 \\ -1 & 1 & 2 \\ 2 & 1 & 1 \end{bmatrix}$ , then the value of

$\det(\text{adj}(\text{adj}A))$  is :

- (a)  $14^4$
- (b)  $14^3$
- (c) 14
- (d) None of these

4. Adjoint of the matrix  $N = \begin{bmatrix} -4 & -3 & -3 \\ 1 & 0 & 1 \\ 4 & 4 & 3 \end{bmatrix}$  is :

- (a)  $N$
- (b)  $2N$
- (c)  $-N$
- (d) None of these

5. If the system of equations  $ax + y + z = 0$ ,  $x + by + z = 0$  and  $x + y + cz = 0$ , where  $a, b, c \neq 1$ , has a non trivial solution, then the value

of  $\frac{1}{1-a} + \frac{1}{1-b} + \frac{1}{1-c}$  is :

- (a) -1
- (b) 0
- (c) 1
- (d) None of these

1. ekuk  $R$  dk  $N \times N$  ij,  $(a, b)R(c, d) \Rightarrow a + d = b + c$  ds }kjk ij Hkkf"kr gS rc  $R$  gS

- (a) d0y Lorq;
- (b) d0y l efer
- (c) d0y l Øed
- (d) rq; rk l Ecu/k

2. çkÑfrd l  $f$ ; kvkads l epp; l si wkkkadsfy; s, d Qyu  $f$  bl idkj ij Hkkf"kr gSfd %

$$f(n) = \begin{cases} \frac{n-1}{2}, & \text{tgk } n \text{ fo"ke l } \mathbb{N}; k \text{ gS} \\ -\frac{n}{2}, & \text{tgk } n \text{ l e l } \mathbb{N}; k \text{ 2 gS} \end{cases}$$

- (a) , dsh yfdu vkPNknd ugha
- (b) vkPNknd yfdu , dsh ugh
- (c) , dsh vj vkPNknd nksuka
- (d) u rks , dsh vj u gh vkPNknd

3. ; fn  $A = \begin{bmatrix} 1 & 2 & -1 \\ -1 & 1 & 2 \\ 2 & 1 & 1 \end{bmatrix}$  gS rks  $\det(\text{adj}(\text{adj}A))$

dk eku gS %

- (a)  $14^4$
- (b)  $14^3$
- (c) 14
- (d) buel s dkb/ ugha

4. v0; g  $N = \begin{bmatrix} -4 & -3 & -3 \\ 1 & 0 & 1 \\ 4 & 4 & 3 \end{bmatrix}$  dk l g [k.Mt gS

- (a)  $N$
- (b)  $2N$
- (c)  $-N$
- (d) buel s dkb/ ugha

5. ; fn l ehdj .k fudk;  $ax + y + z = 0$ ,  $x + by + z = 0$  vj  $x + y + cz = 0$ , ds ikl v'kk; gy ugh gS tgk  $a, b, c \neq 1$ , rks

$\frac{1}{1-a} + \frac{1}{1-b} + \frac{1}{1-c}$  dk eku gS

- (a) -1
- (b) 0
- (c) 1
- (d) buel s dkb/ ugha

6. Let  $S$  be a set containing  $n$  elements and we select 2 subsets  $A$  and  $B$  of  $S$  at random then the probability that  $A \cup B = S$  and  $A \cap B = \phi$  is :

- (a)  $2^n$  (b)  $n^2$
- (c)  $1/n$  (d)  $1/2^n$

7. Let  $A, B$  and  $C$  be the three events such that  $P(A) = 0.3, P(B) = 0.4, P(C) = 0.8, P(A \cap B) = 0.08, P(A \cap C) = 0.28$  and  $P(A \cap B \cap C) = 0.09$ . If  $P(A \cup B \cup C) \geq 0.75$  then  $P(B \cap C)$  satisfies :

- (a)  $P(B \cap C) \leq 0.23$
- (b)  $P(B \cap C) \leq 0.48$
- (c)  $0.23 \leq P(B \cap C) \leq 0.48$
- (d) None of these

8. In a bag there are three tickets numbered 1, 2, 3. A ticket is drawn at random and put back and this is done four times. The probability that the sum of the numbers is even, is :

- (a)  $\frac{41}{81}$  (b)  $\frac{39}{81}$
- (c)  $\frac{40}{81}$  (d) None of these

9. If,  $\sin^{-1} a + \sin^{-1} b + \sin^{-1} c = \pi$  then the value of  $a\sqrt{1-a^2} + b\sqrt{1-b^2} + c\sqrt{1-c^2}$  will be :

- (a)  $2abc$  (b)  $abc$
- (c)  $\frac{1}{2}abc$  (d)  $\frac{1}{3}abc$

10. If the scalar projection of the vectors  $xi - j + k$  on the vector  $2i - j + 5k$  is  $\frac{1}{\sqrt{30}}$  then the value of  $x$  is equal to :

- (a)  $\frac{-5}{2}$  (b) 6
- (c) -6 (d) 3

6. ekuk  $I$  epp;  $S$  ean  $vo$ ; o gâvks  $I$  epp;  $S$  dsnks  $mi$   $I$  epp;  $kA$  vks  $B$  dks;  $nPN$ ;  $k$  ppuk tkrk gš rc  $A \cup B = S$  vks  $A \cap B = \phi$  dh çkf; drk gš%

- (a)  $2^n$  (b)  $n^2$
- (c)  $1/n$  (d)  $1/2^n$

7. ekuk  $A, B$  o  $C$  rhu ?kvuk; agâbl  $i$  çkj  $P(A) = 0.3, P(B) = 0.4, P(C) = 0.8, P(A \cap B) = 0.08$   $P(A \cap C) = 0.28$  vks  $P(A \cap B \cap C) = 0.09$  gš; fn  $P(A \cup B \cup C) \geq 0.75$  rc  $P(B \cap C)$   $I$  rçv gšçk

- (a)  $P(B \cap C) \leq 0.23$
- (b)  $P(B \cap C) \leq 0.48$
- (c)  $0.23 \leq P(B \cap C) \leq 0.48$
- (d) buea  $I$  s dkbz ugha

8.  $d$  fks searhu  $fvdv$  gâftu  $ij$  1, 2, 3 vîdr gâ  $d$   $fvdv$  dks;  $nPN$ ;  $k$  fudkyk tkrk gš,  $oa$   $oki$   $I$   $j$   $[k$  tkrk gâ;  $g$  çfç;  $k$  pkj çkj  $nksj$   $kbz$  tkrh gš rks  $I$  ç;  $kvka$   $dk$ ;  $ksçQy$   $I$  e gšçs dh çkf; drk gš%

- (a)  $\frac{41}{81}$  (b)  $\frac{39}{81}$
- (c)  $\frac{40}{81}$  (d) buea  $I$  s dkbz ugha

9. ; fn  $\sin^{-1} a + \sin^{-1} b + \sin^{-1} c = \pi$  rc

$a\sqrt{1-a^2} + b\sqrt{1-b^2} + c\sqrt{1-c^2}$  dk eku gšçk %

- (a)  $2abc$  (b)  $abc$
- (c)  $\frac{1}{2}abc$  (d)  $\frac{1}{3}abc$

10. ; fn  $I$  fn<sup>n</sup>k  $xi - j + k$  dk  $I$  fn<sup>n</sup>k  $2i - j + 5k$   $ij$  vfn<sup>n</sup>k

ççki  $\frac{1}{\sqrt{30}}$  gš rc  $x$  dk eku gš%

- (a)  $\frac{-5}{2}$  (b) 6
- (c) -6 (d) 3

11. If  $a = i + j + k, b = i + 3j + 5k$  and  $c = 7i + 9j + 11k$ , then the area of the parallelogram having diagonals  $a + b$  and  $b + c$  is :

- (a)  $4\sqrt{6}$  (b)  $\frac{1}{2}\sqrt{21}$   
(c)  $\frac{\sqrt{6}}{2}$  (d)  $\sqrt{6}$

12. The angle between the lines  $2x = 3y = -z$  and  $6x = -y = -4z$ , is :

- (a)  $0^\circ$  (b)  $30^\circ$   
(c)  $45^\circ$  (d)  $90^\circ$

13. The image of the point  $(1, 3, 4)$  with respect to the plane  $2x - y + z + 3 = 0$  is :

- (a)  $(-1, 4, 3)$  (b)  $(-3, 5, 2)$   
(c)  $(1, 3, 4)$  (d)  $(-1, -3, -4)$

14. The centre of sphere passes through four points  $(0, 0, 0)$ ,  $(0, 2, 0)$ ,  $(1, 0, 0)$  and  $(0, 0, 4)$  is

- (a)  $\left(\frac{1}{2}, 1, 2\right)$  (b)  $\left(-\frac{1}{2}, 1, 2\right)$   
(c)  $\left(\frac{1}{2}, 1, -2\right)$  (d)  $\left(1, \frac{1}{2}, 2\right)$

15. The value of  $f(0)$ , so that the function

$$f(x) = \frac{(27-2x)^{1/3} - 3}{9-3(243+5x)^{1/5}}, (x \neq 0) \text{ is continuous,}$$

is given by :

- (a)  $2/3$  (b)  $6$   
(c)  $2$  (d)  $4$

16. If  $x = t + \frac{1}{t}, y = t - \frac{1}{t}$ , then  $\frac{d^2y}{dx^2}$  is equal to :

- (a)  $-4t(t^2 - 1)^{-2}$  (b)  $-4t^3(t^2 - 1)^{-3}$   
(c)  $(t^2 + 1)(t^2 - 1)^{-1}$  (d)  $-4t^2(t^2 - 1)^{-2}$

11. ; fn  $a = i + j + k, b = i + 3j + 5k$  rFkk  $c = 7i + 9j + 11k$  gk rks fod. kZa + b rFkk b + c okys l ekrj prkkt dk {ks-Qy gS

- (a)  $4\sqrt{6}$  (b)  $\frac{1}{2}\sqrt{21}$   
(c)  $\frac{\sqrt{6}}{2}$  (d)  $\sqrt{6}$

12. j\$kkvka  $2x = 3y = -z$  rFkk  $6x = -y = -4z$  ds e/; dksk gS

- (a)  $0^\circ$  (b)  $30^\circ$   
(c)  $45^\circ$  (d)  $90^\circ$

13. fclnq(1, 3, 4) dsl ery  $2x - y + z + 3 = 0$  dsl ki {k çfrfcEc gS

- (a)  $(-1, 4, 3)$  (b)  $(-3, 5, 2)$   
(c)  $(1, 3, 4)$  (d)  $(-1, -3, -4)$

14. pkj fclnqvka  $(0, 0, 0)$ ,  $(0, 2, 0)$ ,  $(1, 0, 0)$  rFkk  $(0, 0, 4)$  l s xqt jus okys xlsys dk dlnz gS%

- (a)  $\left(\frac{1}{2}, 1, 2\right)$  (b)  $\left(-\frac{1}{2}, 1, 2\right)$   
(c)  $\left(\frac{1}{2}, 1, -2\right)$  (d)  $\left(1, \frac{1}{2}, 2\right)$

15.  $f(0)$  dk ekuj bl idkj fd Qy

$$f(x) = \frac{(27-2x)^{1/3} - 3}{9-3(243+5x)^{1/5}}, (x \neq 0) \text{ l rr-gS}$$

- (a)  $2/3$  (b)  $6$   
(c)  $2$  (d)  $4$

16. ; fn  $x = t + \frac{1}{t}, y = t - \frac{1}{t}$ , rks  $\frac{d^2y}{dx^2}$  cjkj gS%

- (a)  $-4t(t^2 - 1)^{-2}$  (b)  $-4t^3(t^2 - 1)^{-3}$   
(c)  $(t^2 + 1)(t^2 - 1)^{-1}$  (d)  $-4t^2(t^2 - 1)^{-2}$

17. If  $x$  is real, then the minimum value of  $y = \frac{x^2 - x + 1}{x^2 + x + 1}$  is:

- (a) 3
- (b)  $\frac{1}{3}$
- (c)  $\frac{1}{2}$
- (d) 2

18. If  $f(x) = Kx - \cos x$  is monotonically increasing for all  $x \in R$  then:

- (a)  $K > -1$
- (b)  $K < 1$
- (c)  $x > 1$
- (d) None of these

19. The maximum value of  $\sin x (1 + \cos x)$  is:

- (a) 3
- (b)  $\frac{3\sqrt{3}}{4}$
- (c) 4
- (d)  $3\sqrt{3}$

20. The value of  $\int \sec x \log(\sec x + \tan x) dx$  is:

- (a)  $[\log(\sec x + \tan x)]^2 + c$
- (b)  $\frac{1}{2}[\log(\sec x + \tan x)]^2 + c$
- (c)  $\sec^2 x + \tan x \sec x + c$
- (d) None of these

21. The value of  $\int_0^{\pi/2} \frac{x \sin x \cos x}{\cos^4 x + \sin^4 x} dx$  is:

- (a) 0
- (b)  $\frac{\pi}{8}$
- (c)  $\frac{\pi^2}{8}$
- (d)  $\frac{\pi^2}{16}$

22. The area in the first quadrant between  $x^2 + y^2 = \pi^2$  and  $y = \sin x$  is:

- (a)  $\frac{(\pi^3 - 8)}{4}$
- (b)  $\frac{\pi^3}{4}$
- (c)  $\frac{(\pi^3 - 16)}{4}$
- (d)  $\frac{(\pi^3 - 8)}{2}$

17. ; fn  $x \in R$  k g\$ rks  $y = \frac{x^2 - x + 1}{x^2 + x + 1}$  dk U; wure eku g\$%

- (a) 3
- (b)  $\frac{1}{3}$
- (c)  $\frac{1}{2}$
- (d) 2

18. ; fn  $x \in R$  dsfy,  $f(x) = Kx - \cos x$  l eku of) eku Qyu g\$ rc :

- (a)  $K > -1$
- (b)  $K < 1$
- (c)  $x > 1$
- (d) buer l s dkbz ugha

19.  $\sin x (1 + \cos x)$  dk vf/kdre eku g\$%

- (a) 3
- (b)  $\frac{3\sqrt{3}}{4}$
- (c) 4
- (d)  $3\sqrt{3}$

20.  $\int \sec x \log(\sec x + \tan x) dx$  dk eku g\$%

- (a)  $[\log(\sec x + \tan x)]^2 + c$
- (b)  $\frac{1}{2}[\log(\sec x + \tan x)]^2 + c$
- (c)  $\sec^2 x + \tan x \sec x + c$
- (d) buer l s dkbz ugha

21.  $\int_0^{\pi/2} \frac{x \sin x \cos x}{\cos^4 x + \sin^4 x} dx$  dk eku g\$%

- (a) 0
- (b)  $\frac{\pi}{8}$
- (c)  $\frac{\pi^2}{8}$
- (d)  $\frac{\pi^2}{16}$

22. cFke prfkk ea  $x^2 + y^2 = \pi^2$ , oa  $y = \sin x$  dschp f?kjk {k=Qy g\$%

- (a)  $\frac{(\pi^3 - 8)}{4}$
- (b)  $\frac{\pi^3}{4}$
- (c)  $\frac{(\pi^3 - 16)}{4}$
- (d)  $\frac{(\pi^3 - 8)}{2}$

23. The order of the differential equation whose solution is  $x^2 + y^2 + 2gx + 2fy + c = 0$ , is :

- (a) 1 (b) 2  
(c) 3 (d) 4

24. Solution of the differential equation

$$\frac{dy}{dx} + y \sec^2 x = \tan x \sec^2 x \text{ is :}$$

- (a)  $y = \tan x - 1 + ce^{-\tan x}$   
(b)  $y^2 = \tan x - 1 + ce^{-\tan x}$   
(c)  $ye^{\tan x} = \tan x - 1 + c$   
(d)  $ye^{\tan x} = \tan x - 1 + c$

25.  $\lim_{x \rightarrow -2} \frac{\sin^{-1}(x+2)}{x^2 + 2x}$  is equal to :

- (a) 9 (b)  $\infty$   
(c)  $-1/2$  (d) None of these

23. The order of the differential equation whose solution is  $x^2 + y^2 + 2gx + 2fy + c = 0$ , is :

- (a) 1 (b) 2  
(c) 3 (d) 4

24. Solution of the differential equation  $\frac{dy}{dx} + y \sec^2 x = \tan x \sec^2 x$  is :

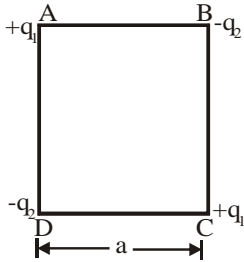
- (a)  $y = \tan x - 1 + ce^{-\tan x}$   
(b)  $y^2 = \tan x - 1 + ce^{-\tan x}$   
(c)  $ye^{\tan x} = \tan x - 1 + c$   
(d)  $ye^{\tan x} = \tan x - 1 + c$

25.  $\lim_{x \rightarrow -2} \frac{\sin^{-1}(x+2)}{x^2 + 2x}$  is equal to :

- (a) 9 (b)  $\infty$   
(c)  $-1/2$  (d) None of these

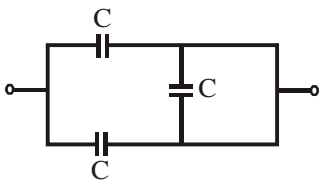
**SCIENCE**

26. Charges are placed at corners of a square of side 'a'. If the charge A is in equilibrium, then ratio  $\frac{q_1}{q_2}$  is



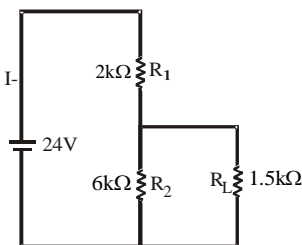
- (a) 1
- (b)  $\sqrt{2}$
- (c)  $\frac{1}{\sqrt{2}}$
- (d)  $2\sqrt{2}$

27. The equivalent capacitance of the combination below is



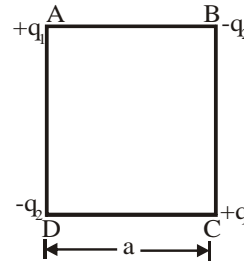
- (a) 2C
- (b) C
- (c)  $\frac{1}{2}C$
- (d) None of these

28. For the circuit shown in the figure.



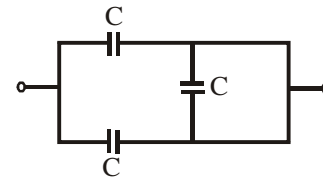
- (a) the current I through the battery is 7.5 mA
- (b) the potential difference across  $R_L$  is 18 Volt
- (c) ratio of powers dissipated in  $R_1$  and  $R_2$  is 3
- (d) None of these

26. i R; d 'a' Hkqk okysoxZdspkjkadkuka i j vkoš k j [ks gq sgA ; fn vkoš k A l lryyu eagš rks  $\frac{q_1}{q_2}$  dk eku gA



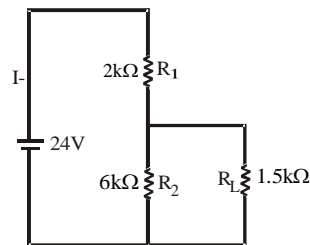
- (a) 1
- (b)  $\sqrt{2}$
- (c)  $\frac{1}{\sqrt{2}}$
- (d)  $2\sqrt{2}$

27. ułps fn; s x; s l a kst u dh rŸ; /kkfj rk gš%



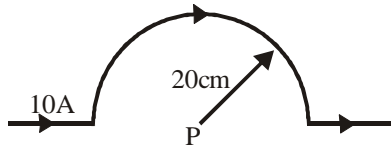
- (a) 2C
- (b) C
- (c)  $\frac{1}{2}C$
- (d) buea l s dkkbZ ugha

28. fp= ean'kkZ s x; s ifji Fk dsfy, %



- (a) cšVjh l s i dkkfgr /kkjk I dk eku 7.5 mA gkš k
- (b)  $R_L$  dk fołkoku rj 18 Volt gš
- (c)  $R_1$ , oar  $R_2$  ea Å tkZ ds gkl dk vuq kr 3 gš
- (d) buea l s dkkbZ ugha

29. A current of 10 A is passing through a long wire which has semicircular loop of the radius 20 cm as shown in the figure. Magnetic field produced at the centre of the loop is



- (a)  $10 \pi \mu T$
- (b)  $5 \pi \mu T$
- (c)  $4 \pi \mu T$
- (d)  $2 \pi \mu T$

30. If a magnet is suspended at an angle  $30^\circ$  to the magnetic meridian, the dip of needle makes an angle of  $45^\circ$  with the horizontal, the real dip is

- (a)  $\tan^{-1}\left(\frac{\sqrt{3}}{2}\right)$
- (b)  $\tan^{-1}(\sqrt{3})$
- (c)  $\tan^{-1}\left(\sqrt{\frac{3}{2}}\right)$
- (d)  $\tan^{-1}\left(\frac{2}{\sqrt{3}}\right)$

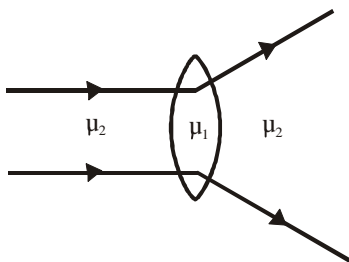
31. What is the average value of the AC voltage over one complete cycle?

- (a) Zero
- (b)  $V_{\max}$
- (c)  $\frac{2V_{\max}}{\pi}$
- (d)  $\frac{V_{\max}}{2}$

32. Solar radiation is

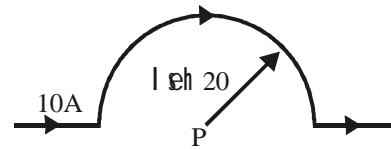
- (a) transverse electromagnetic waves
- (b) longitudinal electromagnetic waves
- (c) stationary waves
- (d) None of the above

33. A convex lens made up of a material of refractive index  $\mu_1$  is immersed in a medium of refractive index  $\mu_2$  as shown in the figure. The relation between  $\mu_1$  and  $\mu_2$  is



- (a)  $\mu_1 < \mu_2$
- (b)  $\mu_1 > \mu_2$
- (c)  $\mu_1 = \mu_2$
- (d)  $\mu_1 = \sqrt{\mu_2}$

29. , d 10 , fEi ; j dh /kkjk , d dqMyhupek yEcs rkj ftl dh f=T; k 20 l eh gS ea iokfgr gkrh gS tS k fd fp= eafn[kk; k x; k gS bl dtMyh ds dhnz ij mRi lu pfcidh; {ks= g%



- (a)  $10 \pi \mu T$
- (b)  $5 \pi \mu T$
- (c)  $4 \pi \mu T$
- (d)  $2 \pi \mu T$

30. ; fn , d pfcid pfcidh; ; kE; kkkj l s dks k 30° ij yVdkus ij ml dh fnd+kr l pZ {kR-t l s 45° dk dksk cukrh gS rC bl LFku ij okLrfod fnd+kr g%

- (a)  $\tan^{-1}\left(\frac{\sqrt{3}}{2}\right)$
- (b)  $\tan^{-1}(\sqrt{3})$
- (c)  $\tan^{-1}\left(\sqrt{\frac{3}{2}}\right)$
- (d)  $\tan^{-1}\left(\frac{2}{\sqrt{3}}\right)$

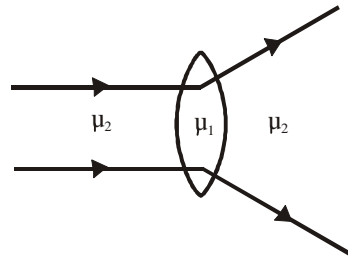
31. i R; korhZ okVst dk , d iwlz pØ ds nkjku vks r eku D; k gS

- (a) Zero
- (b)  $V_{\max}$
- (c)  $\frac{2V_{\max}}{\pi}$
- (d)  $\frac{V_{\max}}{2}$

32. l kS fofdj .k gS%

- (a) vuq LFk fo | r pfcidh; rjxa
- (b) vuqS; lfo | r pfcidh; rjxa
- (c) vixkeh rjxs
- (d) bueal s dkbZ ugha

33. , d mRry yBl ftl ds inkfZ dk viorZkad  $\mu_1$  gS dks , d nW jsek/; e ftl dk viorZkad  $\mu_2$  gS ea Mqks k x; k gS tS k fd fp= eafn[kk; k x; k gS rks viorZkad  $\mu_1$  vks viorZkad  $\mu_2$  ds chp D; k l Ecl/k gS



- (a)  $\mu_1 < \mu_2$
- (b)  $\mu_1 > \mu_2$
- (c)  $\mu_1 = \mu_2$
- (d)  $\mu_1 = \sqrt{\mu_2}$



34. 2kg ice of  $-20^{\circ}\text{C}$  is mixed with 5kg of water of  $20^{\circ}\text{C}$ . Then the amount of the water in the container will be :

- (a) 6 kg (b) 7 kg  
(c) 6.5 kg (d) 5.5 kg

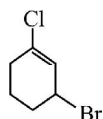
35. Phase difference between the vibrating particles of the plane of vibration is. –

- (a)  $\pi$  (b)  $\frac{\pi}{2}$   
(c) 0 (d) None of these

36. A reaction was found to be of second order with respect to the concentration of carbon monoxide. If the concentration of carbon monoxide is doubled, with everything else kept the same, the rate of reaction will

- (a) double  
(b) remain unchanged  
(c) triple  
(d) increase by a factor of 4.

37. The IUPAC name of the compound shown below is :



- (a) 1-bromo-3-chlorocyclohexene  
(b) 2-bromo-6-chlorocyclohex-1-ene  
(c) 6-bromo-2-chlorocyclohexene  
(d) 3-bromo-1-chlorocyclohexene.

38. The correct order of increasing acid strength, of the compounds



- (a)  $\text{I} < \text{IV} < \text{III} < \text{II}$  (b)  $\text{II} < \text{IV} < \text{I} < \text{III}$   
(c)  $\text{IV} < \text{I} < \text{III} < \text{II}$  (d)  $\text{IV} < \text{I} < \text{II} < \text{III}$

39. Uncertainty in the position of an electron (mass =  $9.1 \times 10^{-31} \text{ kg}$ ) moving with a velocity  $300 \text{ ms}^{-1}$ , accurate upto 0.001 %, will be ( $h = 6.63 \times 10^{-34} \text{ Js}$ )

- (a)  $3.84 \times 10^{-2} \text{ m}$  (b)  $19.2 \times 10^{-2} \text{ m}$   
(c)  $5.76 \times 10^{-2} \text{ m}$  (d)  $1.92 \times 10^{-2} \text{ m}$

34.  $-20^{\circ}\text{C}$  ds 2kg cOZ dks  $20^{\circ}\text{C}$  ds 5kg i kuh eafeyk; k tkrk gS rks dV/suj eafdruk i kuh glskk&

- (a) 6 kg (b) 7 kg  
(c) 6.5 kg (d) 5.5 kg

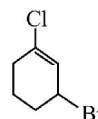
35. I ery ij dEi u djrs gq i R; d d.k ds chp dk dkyklrj gS %

- (a)  $\pi$  (b)  $\frac{\pi}{2}$   
(c) 0 (d) buea l s dkbZ ugh

36. , d j l k; fud vfHkfØ; k] dkcZu ekuKØI kbM dh l kUnrk dsl UnHkZ eaf}rh; Øe dk gA ; fn dkcZu ekuKØI kbM dh l kUnrk nksqph dj nh tk, ] ¼ kSk l Hkh ?kVdka dks , d l eku ¼LFkj ½ j [krsgq ½ rc vfHkfØ; k dh nj gls tk, xh %

- (a) nksqpk  
(b) vijofrZr glsxh  
(c) rhu xqpk  
(d) 4 ds xqkt esc<xk

37. uhps in f'kr tØ ; kfxd dk IUPAC uke D; k gS



- (a) 1-bromo-3-chlorocyclohexene  
(b) 2-bromo-6-chlorocyclohex-1-ene  
(c) 6-bromo-2-chlorocyclohexene  
(d) 3-bromo-1-chlorocyclohexene.

38. fuEufyf [kr ; kfxdka dh c<Fh vEyh; {kerk dk l gh Øe D; k glskk\



- (a)  $\text{I} < \text{IV} < \text{III} < \text{II}$  (b)  $\text{II} < \text{IV} < \text{I} < \text{III}$   
(c)  $\text{IV} < \text{I} < \text{III} < \text{II}$  (d)  $\text{IV} < \text{I} < \text{II} < \text{III}$

39. , d byDVku (nØ; eku =  $9.1 \times 10^{-31} \text{ kg}$ ) dh vofLFkr dh vfuf'prrk dks 0.001 % l Vhdrk ds nk; js ea Kkr dja tks  $300 \text{ ms}^{-1}$ , ds ox l s xfreku gS ( $h = 6.63 \times 10^{-34} \text{ Js}$ )

- (a)  $3.84 \times 10^{-2} \text{ m}$  (b)  $19.2 \times 10^{-2} \text{ m}$   
(c)  $5.76 \times 10^{-2} \text{ m}$  (d)  $1.92 \times 10^{-2} \text{ m}$

40. Rate of a reaction can be expressed by Arrhenius equation as  $K = A e^{-K/RT}$  in the equation, E represents]
- the fraction of molecules with energy greater than the activation energy of the reaction.
  - the energy above which all the colliding molecules will react.
  - the energy below which colliding molecules will not react.
  - the total energy of the reacting molecules at a temperature, T.
41. Resistance of a conductivity cell filled with a solution of an electrolyte of concentration 0.1 M is 100  $\Omega$ . The conductivity of this solution is 1.29  $S m^{-1}$ . Resistance of the same cell when filled with 0.2 M of the same solution is 520  $\Omega$ . The molar conductivity of 0.02 M solution of the electrolyte will be
- $12.4 \times 10^{-4} S m^2 mol^{-1}$
  - $124 \times 10^{-4} S m^2 mol^{-1}$
  - $1240 \times 10^{-4} S m^2 mol^{-1}$
  - $1.24 \times 10^{-4} S m^2 mol^{-1}$
42. The major binding force of diamond, silicon and quartz is :
- electrostatic force
  - electrical attraction force
  - covalent bond force
  - non-covalent bond force
43. Gold number indicates :
- protective action of lyophilic colloid.
  - charge on gold solution.
  - protective action of lyophobic colloid.
  - quantity of gold dissolved in a given solution.
44. Match the compounds given in column I with the effects given in column II.
- | Column-I            | Column-II         |
|---------------------|-------------------|
| (i) Chloramphenicol | (a) Malaria       |
| (ii) Thyroxine      | (b) Anaesthetic   |
| (iii) Chloroquine   | (c) Typhoid fever |
| (iv) Chloroform     | (d) Goiter        |
- Codes :**
- (i-c), (ii-d), (iii-a), (iv-b)
  - (i-a), (ii-b), (iii-c), (iv-d)
  - (i-b), (ii-c), (iii-a), (iv-d)
  - (i-d), (ii-a), (iii-b), (iv-c)
40. Arrhenius equation is  $K = A e^{-K/RT}$  where E represents
- fraction of molecules with energy greater than activation energy
  - energy above which all colliding molecules react
  - energy below which colliding molecules do not react
  - total energy of reacting molecules at temperature T
41. Resistance of a cell with 0.1 M electrolyte is 100  $\Omega$ . Conductivity is 1.29  $S m^{-1}$ . Resistance with 0.2 M is 520  $\Omega$ . Molar conductivity of 0.02 M solution is
- $12.4 \times 10^{-4} S m^2 mol^{-1}$
  - $124 \times 10^{-4} S m^2 mol^{-1}$
  - $1240 \times 10^{-4} S m^2 mol^{-1}$
  - $1.24 \times 10^{-4} S m^2 mol^{-1}$
42. Binding force in diamond, silicon, quartz
- electrostatic
  - electrical attraction
  - covalent bond
  - non-covalent bond
43. Gold number indicates
- protective action of lyophilic colloid
  - charge on gold solution
  - protective action of lyophobic colloid
  - quantity of gold dissolved
44. Match compounds with effects
- | dkye&I            | dkye& II                   |
|-------------------|----------------------------|
| (i) DykjeQsudky   | (a) eysj ; k               |
| (ii) Thyroxine    | (b) , usLFkfl ; k ½unk nð½ |
| (iii) Chloroquine | (c) Vk; Qk; M Toj          |
| (iv) Chloroform   | (d) ?k&kk                  |
- dV %**
- (i-c), (ii-d), (iii-a), (iv-b)
  - (i-a), (ii-b), (iii-c), (iv-d)
  - (i-b), (ii-c), (iii-a), (iv-d)
  - (i-d), (ii-a), (iii-b), (iv-c)

45.  $\text{CCl}_4$  is a well known fire extinguisher. However after using it to extinguish fire, the room should be well ventilated. This is because :
- it is inflammable at higher temperatures
  - it is toxic
  - it produces phosgene by reaction with water vapours at higher temperatures
  - it is corrosive
46. Enzymes, vitamins and hormones can be classified into a single category of biological chemicals, because all of these
- are synthesized in the body
  - enhance oxidative metabolism
  - help in regulating metabolism
  - are proteins
47. Seal is :
- carnivorous mammal
  - herbivorous mammal
  - amphibian
  - fish
48. Which is correct matching of causative organism and the disease it causes
- Anopheles maculipennis-malaria
  - Glossina palpalis-sleeping sickness
  - Wuchereria bancrofti-filariasis
  - Leishmania donovani-sleeping sickness
49. Haemoglobin is found dissolved in blood plasma of
- cockroach
  - earthworm
  - rabbit
  - frog
50. Which group contains biocatalysts
- peptidase, amylase, rennin
  - myosin, oxytocin, adrenalin
  - rhodopsin, pepsin, steapsin
  - glucose, amino acids, fatty acids
45.  $\text{CCl}_4$ , d ykdfi z vfxu "keu j l k; u gSi jUrqbl ds i z kx dsckn] dejsdksvPNh rjg l sgoknkj cukuk pkfg, A , d k bl fy, D; kfd&
- ; g mPp rki eku ij Toyu"kh y gkrk gA
  - ; g tgjhyk gkrk gA
  - ; g mPp rki eku ij ty ok'i dsl kFk vfhkFØ; k djds Qkl thu xS cukrk gA
  - ; g tæ i h k djrk gA
46. fd.od] foVkfou rFkk gjjeku dks , d , dek= t b j l k; u oxl eaj [k l drs gA D; kfd ; s l Hkh&
- 'kj hj ea curs gA
  - vkDI hdkjd mi kp; fØ; k dks c<krs gA
  - miki p; u fØ; k ds fu; eu ea enn djrs gA
  - i k/hu gkrk gA
47. l hy gkrk gS %
- , d ekl kgkj h Lruik; h
  - 'kkdkgkj h Lruik; h
  - mHk; thoh
  - eNyh
48. buel s dks j kx tud tho rFkk ml ds }kj k tfur j kx dk l gh l e f y r ; k e g S
- , ukfQyht eD; f r y i f u l & e y f j ; k
  - Xy k f l u k i k y i f y l & f u n k j k x
  - o p j f j ; k c Ø k V h & Q k b y f j ; k
  - y h ' k e f u ; k n k u k o k u h & f u n k j k x A
49. g h e k k y k f c u f d l d s j D r l y k T e k e a ? k y h v o l F k e a i k ; k t k r k g S
- d k d j k p 1/4 r y p V V k 1/2
  - d p y k
  - [ k j x k s k
  - e a d
50. bues l s f d l l e g e a t b m R i j d g A
- i s V h M s ] , e k b y d ] j s u u
  - ek; k f l u] vkDI h v k f l u] , M h u k f y u
  - j k M i f l u] i s l h u] L V s l l u
  - X y d k s t ] , e h u k s v E y] Q S h v E y

**PART - II****ENGLISH****Spotting Error**

**Directions :** Each item in this section has a sentence which is divided into parts labelled (a), (b) and (c). Read each sentence to find out whether there is any error in any part and indicate your answer in the Answer Sheet against the corresponding letter i.e., (a) (b) or (c) . If you find no error, your response should be indicated as (d).

51. Emphasis on equality of life ensures (a) / for the health and happiness (b) / of every individual (c) / No error (d)
52. Unless you stop to make noise at once (a) / I will have no option but to (b) / bring the matter to the attention of the police (c) / No error (d)
53. Not one of the hundreds (a) / of striking workers (b) / were allowed to go near the factory (c) / No error (d)
54. The students were (a) / awaiting for (b) / the arrival of the chief guest (c) / No error (d)
55. The reason for (a) / his failure is because (b) / he did not work hard(c) / No error (d)

**Fill in the Blanks**

**Directions :** Each of the following sentences in this section has a blank space and four words or group of words given after the sentence. Select whichever word or group of words you consider most appropriate for the blank space and indicate your response on the Answer Sheet accordingly.

56. He was offered a salary commensurate \_\_\_\_\_ the work.  
(a) as (b) to (c) with (d) by
57. The accused \_\_\_\_\_ his involvement in the murder case.  
(a) refused (b) denied (c) rejected (d) slammed
58. The government passed a new \_\_\_\_\_ against smuggling, in parliament.  
(a) ordinance (b) ordnance (c) dictat (d) orders
59. The cyclone \_\_\_\_\_ without causing any great catastrophe.  
(a) abetted (b) abated (c) flowed (d) embeded

**Synonyms**

**Direction:** Each item in this section consists of a word in capital letters followed by four words as (a), (b), (c) and (d). Select the word which is most nearly the same in meaning as the original word and mark the correct response as (a), (b), (c) or (d) as the case may be, in your Answer Sheet.

60. RESIDUE  
(a) Remainder (b) Nothing  
(c) Recede (d) Little
61. ACME  
(a) Nadir (b) Lowest point  
(c) Culmination (d) Zenith
62. ASKANCE  
(a) Awry (b) Obliquely  
(c) To look with disdain (d) Without disapprobation
63. ADUMBRATE  
(a) To give a faint shadow of (b) To shadow forth  
(c) To fore -shadow (d) To over shadow

**Antonyms**

**Direction :** Each item in this section consists of a word in capital letters followed by four words or phrases as (a), (b), (c) and (d). Select the word or phrase which is nearly opposite to the meaning of the original word and mark the correct response as (a), (b), (c) or (d) as the case may be, in your Answer Sheet.

64. PROLIX  
 (a) Common (b) Attractive (c) Short and crisp (d) Bulging out
65. LAUD  
 (a) To censure (b) To respect (c) To connive (d) To descend
66. RECOUP  
 (a) To worsen (b) To strengthen (c) To trap (d) To recover
67. DROLL  
 (a) Roller (b) Shout (c) Serious (d) Whimsical

**Ordering of Words in a Sentence**

**Directions :** Each of the following items in this section consists of a sentence the parts of which have been jumbled. These parts have been labelled P, Q, R and S. Given below each sentence are four sequences namely (a), (b), (c) and (d). You are required to re-arrange the jumbled parts of the sentence and select the correct sequence.

68. P : rules and regulations  
 Q : he cheerfully ignored its demands  
 R : a life of  
 S : unaccustomed to .  
 The correct order should be :  
 (a) R Q P S (b) Q R P S (c) S R P Q (d) Q S R P
69. P : a person bitten by a rabid dog  
 Q : would be seized by violent symptoms  
 R : after an incubation period of a month or two  
 S : and die an agonizing death  
 The correct order should be :  
 (a) P R S Q (b) S R Q P (c) P R Q S (d) P Q R S
70. P : and to decide impartially  
 Q : to hear courteously, to answer wisely  
 R : four things belong to a judge  
 S : to consider soberly  
 The correct order should be :  
 (a) S Q P R (b) R Q S P (c) Q R P S (d) P Q R S
71. P : four degrees below normal  
 Q : icy winds lashed Srinagar  
 R : with minimum temperature registering  
 S : which was already in the grip of gruelling cold wave conditions  
 The correct order should be :  
 (a) Q S R P (b) Q P R S (c) R Q S P (d) P Q S R

**READING COMPREHENSION**

**Directions :** *In this section, is one short passage. After the passage, you will find few questions each based on what is stated or implied in the passage. First read the passage and then answer the questions following the passage.*

**PASSAGE**

Our age is the age of specializations. Each one knows more about less and less. We concentrate on some narrow field and forget about the largest context in which we could see the meaning of our own specialization. Modern specialization has led to the fragmentation of knowledge. We should not only be specialists but also have a sense of the meaning of life and of social responsibility. We have to reckon with the spirit of science, understand its limitations and develop an outlook which is consistent with its findings. It is no use clinging to traditional forms which have lost their meanings. We cannot ignore the world of scientific achievement and withdraw into the inner life of contemplation. We are involved in the mechanism of the modern world and so should seek even religious truth not merely with our emotions but with our minds. We cannot ignore the scientific civilization. Nor can we drop religion. To reconcile the two is the task set for our generation.

72. The writer says that
- (a) We should not be specialists
  - (b) We should be specialists
  - (c) We should not be specialist, but have a sense of the meaning of life.
  - (d) We should be specialist and we should also have a sense of the meaning of life and of social responsibility
73. 'Fragmentation' of knowledge means
- (a) Increase of knowledge
  - (b) Assimilation of knowledge
  - (c) Splitting the knowledge into different fields
  - (d) Distribution of knowledge
74. We should seek religious truth with
- (a) Our emotions only
  - (b) Our minds only
  - (c) Our minds as well as our emotions
  - (d) Neither our minds nor our emotions
75. The writer says that we should
- (a) Follow the religious path
  - (b) Follow the scientific way
  - (c) Reject both the scientific way and the religious path
  - (d) Adopt both the scientific way and the religious path and try to remove the contradictions.

## GENERAL AWARENESS

76. Consider the following statements :
- In the context of Indian constitution the directive principles of state policy :
1. Puts limitations on the function of legislature
  2. Puts limitations on the functions of executive
- Which of the above statement is/are true?
- (a) Only 1 (b) Only 2  
(c) 1 & 2 (d) Neither 1 nor 2
77. Consider the following statements :
1. The Election Commission of India is a five member body
  2. The Union Home Ministry decides the election programme both for General as well as by elections
  3. The Election Commission settles the disputes regarding division/merger of recognised political parties
- Which of the above statements is/are true?
- (a) 1 and 2 (b) Only 2  
(c) 2 & 3 (d) Only 3
78. The picture of Bodhisatva Padmpani is the most famous and usually an illustrated form of drawing/painting which is located in?
- (a) Ajanta (b) Badami  
(c) Bagh (d) Ellora
79. During the Civil Disobedience movement, which of the following Riyasats (Princely State) did not support congress?
- (a) Bhavnagar (b) Mysore  
(c) Junagarh (d) Kathiawar
80. The Vice-President of India is :
1. The second highest dignitary of India.
  2. has no responsibility related to his post.
  3. Act's as the President in his absence.
  4. In case of President's resignation, removal or death, he works as the President.
- Choose the correct answer from the codes given below :
- (a) 1 and 2 (b) 1, 2 and 3  
(c) 1, 3 and 4 (d) All these
76. fuEufyf[kr dFkuka ij fopkj dhft, %  
Hkkjr ds l fo/kku ds l UnHkze] jkT; dsufrr funskd rRo  
1- fo/kkf; dk ds dR; ka ij fucD/ku yxkrs gA  
2- dk; i kfydk ds dR; ka ij fucZku yxkrs gA  
mi jDr d Fkuka eal sd k&l k@l sl gh g@gA  
(a) dOy 1 (b) dOy 2  
(c) 1 vLj 2 (d) u rLj 1] u gh 2
77. fuEufyf[kr dFkuka ij fopkj dhft, %  
1- Hkkjr dk fuokpu vk; kx ikp&l nL; h; fudk; gA  
2- l ?k dk xg el=ky; ] vke puko vLj mi & puko nksuka ds fy, puko dk; De r; djrk gA  
3- fuokpu vk; kx ekU; rk&i klr jktuhfrd nyka ds foHkk tu@foy; l sl Ecfu/kr fookn fui Vkrk gA  
mi jDr dFkuka eal s d k&l k@l sl gh g@gA  
(a) 1 vLj 2 (b) dOy 2  
(c) 2 vLj 3 (d) dOy 3
78. ckf/kl Ro ineikf.k dk fp= l okf/kd ifl ) vLj ik; % vLj s[k fp=dkjh g\$ tks  
(a) vtUrK ea g\$ (b) cnkeh ea g\$  
(c) ck?k ea g\$ (d) , yLj k ea g\$
79. l fou; voKk vLknyu ds nLj ku] fuEufyf[kr eal s fd l fj; kl r us d k p d k l e f k u u g h a f d ; k \  
(a) Hkkrouxj (b) e\$ j  
(c) t w k x < + (d) d k f B ; k o k M +
80. Hkkjr dk mi & j k " V i fr  
1- Hkkjr dk f}rh; mPpre ifrf"Br in/kkj gA  
2- ds ikl in l sl Ecfu/kr dkbZ vLj pkfjd dk; l ?nkf; Ro 1/2 ugha gA  
3- j k " V i fr dh vuq fLFkr eamI ds dk; k d k fuoZu djrk gA  
4- j k " V i fr }kj k in R; kx] vi nLFkdj .k vFkok eR; q ds l e; j k " V i fr ds : i ea dk; l djrk gA  
uhpsfn, x, dW l sl gh mUkj pfu, A  
(a) 1 , oa2 (b) 1] 2 , oa3  
(c) 1] 3 , oa4 (d) ; s l Hkh

81. Who among the followings had produced the opinion for the formation of constituent assembly in India?
- (a) Simon Commission  
(b) Rajaji Formula  
(c) Cabinet Mission Plan  
(d) Vavel Plan
82. Which of the followings Act provided for Federal Government in India?
- (a) Government of India Act-1909  
(b) Government of India Act-1919  
(c) Government of India Act-1935  
(d) Government of India Act-1947
83. Which among the following provisions of the Indian Constitution affect the education?
1. Directive Principle of State Policy
  2. Rural and Urban Local Bodies
  3. 5th Schedule
  4. 6th Schedule
  5. 7th Schedule
- Give the correct answer on the basis of following codes :
- (a) 1 and 3                      (b) 3, 4 and 5  
(b) 1, 2 and 5                (d) All these
84. Who is said to be the saviour of Indian News Papers?
- (a) Lord Ripon                (b) Lord Lyton  
(c) Lord Hastings            (d) Charles Metcoff
85. Which was the first Indian State to come under the 'doctrine of lapses' policy of Dalhousie?
- (a) Sambhalpur                (b) Satara  
(c) Udaipur                    (d) Nagpur
86. "The issue of Deccan became as destructive for Mughal Empire as the issue of Spain for the Napolian."  
Who commented it on Deccan policy of Aurangzeb?
- (a) Manoochi                (b) Bernier  
(c) Tavernier                 (d) Gulam Hussain
81. fuEufyf[kr ea l sfdl , d usHkkjr dsfy, l fo/kku l Hkk %ds xBu dk½ dk fopkj fn; k\
- (a) l kbeu deh'ku  
(b) jktkth Qkkyk  
(c) dscuV fe'ku ; kst uk  
(d) ody ; kst uk
82. fuEufyf[kr ea l sfdl , d vf/kfu; e us Hkkjr ea l a'kh; &'kkl u dh 0; oLFkk nh Fkh\
- (a) Hkkjr l jdkj vf/kfu; e] 1909  
(b) Hkkjr l jdkj vf/kfu; e] 1919  
(c) Hkkjr l jdkj vf/kfu; e] 1935  
(d) Hkkjr l jdkj vf/kfu; e] 1947
83. Hkkjr; l fo/kku dsfuEufyf[kr ea l s dks & l si ko/kku f'k{kk ij i Hkko Mkyrs g\
- 1- jkT; ds ufr fun'kd rRo
  - 2- xkeh.k vks 'kgjh LFkkuh; fudk;
  - 3- i kpo h vuq ph
  - 4- NBh vuq ph
  - 5- l kro h vuq ph
- fuEufyf[kr dWka ds vk/kkj ij l gh mRrj pfu,
- (a) 1 vks 2                      (b) 3] 4 vks 5  
(c) 1] 2 vks 5                (d) ; s l Hkh
84. Hkkjr; l ekpj i =k adk eDr nkrk fdl sdgk tkrk g\
- (a) ykMZ fji u                (b) ykMZ fyVu  
(c) ykMZ gLVak                (d) pkYI Zes/dkMD
85. Mygkst h dh 0; ixr ufr dk f'kdj gks us okyk i gyk Hkkjr; jkT; Fkk%
- (a) l Hkyi j                      (b) l rkj k  
(c) mn; i j                      (d) ukxi j
86. ^; g nDdu dk ukl ij eqy l ketT; dsfy, mruk gh ?krd fl ) gwk ftruk us lky; u dsfy, Li u dk ukl ij A\*\*
- vks xts dh nDdu ufr ij ; g fVli .kh fdl dh g\
- (a) euph                        (b) cfuz j  
(c) Vbfuz j                      (d) xkye gd \u



87. Which type of stone were used in Mathura Art?  
 (a) White Marble (b) Red Sand Stone  
 (c) Black Marble (d) Quartz
88. The metallic coins were found at first during which period?  
 (a) Vedic Era (b) Budhist Era  
 (c) Maurya Era (d) Gupta Era
89. The comets revolve around :  
 (a) Sun  
 (b) Mars  
 (c) Jupiter  
 (d) No single heavenly body
90. The Karakoram Highway connects which of the following two countries?  
 (a) India- Nepal (b) China-India  
 (c) China-Pakistan (d) India-Pakistan
91. Which state has the longest coast line in India?  
 (a) Tamil Nadu (b) Gujarat  
 (c) Andhra Pradesh (d) West Bengal
92. Which two seas are connected by the Suez canal?  
 (a) Red Sea & Arabian Sea  
 (b) Red Sea & Mediterranean Sea  
 (c) Arabian Sea & Mediterranean Sea  
 (d) North Sea & Adriatic Sea
93. Coal & Petroleum is found in :  
 (a) Igneous Rock (b) Sedimentary Rock  
 (c) Metamorphic Rock (d) None of these
94. Find the incorrect pair :  
 (a) Gneiss - Granites  
 (b) Amphibolites - Basalt  
 (c) Schist - Basalt  
 (d) Quartzite - Basalt
95. Juan-de-Fuca plate belongs to  
 (a) Europe (b) North America  
 (c) Africa (d) Japan
96. Which solution has been proposed by the Union Home Minister Rajnath Singh to counter Naxal violence?  
 (a) SAADHAN (b) SAMRIDDHI  
 (c) SAMADHAN (d) SAMARPAN
87. eFkj k efrzbyk ea fdl izkj ds iRFkja dk iz kx fd; k x; k Fkk\  
 (a) l Qn l æejj (b) yky cyqk iRFkj  
 (c) dkyk l æejj (d) DokVtZ
88. /kkrq ds fl Dds l oñ Fke fdl ; qk ea iklr gq gñ  
 (a) ofnd ; qk (b) ckñ ; qk  
 (c) ekñ Z ; qk (d) xlr ; qk
89. /kædsrqpkjka vlgj ?kærs gñ %  
 (a) l w Z ds  
 (b) exy ds  
 (c) cglifr ds  
 (d) fdl h , d vrfj{k fi .M ds ugha
90. dkjkdjje jktekxZbueal sfdu nlsnñkædks tkM/Fk gñ  
 (a) Hkkjr&usi ky (b) phu&Hkkjr  
 (c) phu&ikfdLrku (d) Hkkjr&ikfdLrku
91. Hkkjr dsfdl jkT; dh l cl syæh rVh; l hek gñ  
 (a) rfeyukMq (b) xqfjkr  
 (c) vkU/kz inñk (d) if'pe cakky
92. bueal s dks l snks l eqz Lost ugj l s tM/gñ  
 (a) yky l kxj rFkk vjc l kxj  
 (b) yky l kxj rFkk Hkæ/; l kxj  
 (c) vjc l kxj rFkk Hkæ/; l kxj  
 (d) mYkj h l kxj rFkk , fM², kfVd l kxj
93. dks yk rFkk iñ/ky; e ik; k tkrk gñ %  
 (a) vkUus 'kSyka ea (b) vol knh 'kSyka ea  
 (c) : ikrfjr 'kSyka ea (d) bueal s dkbZ ugha
94. bueal s vl epyr ; ðe dks fpflgr dja %  
 (a) ukbl & xukbV  
 (b) , EQhcksykbV† & cd KYV  
 (c) f'k"V & cd KYV  
 (d) DokVtZkbV & cd KYV
95. t/kku&Mh&¶; wdk ly/ fdl egk}hi l s l Ec) gñ  
 (a) ; jki (b) mYkj h vefj dk  
 (c) vYhdk (d) tki ku
96. dñnh; xgea-h jktukFk fl g us uDI yh fgã k l s fui Vusgrq dks l k l ek/kku i Lrkfor fd; k gñ  
 (a) l k/ku (b) l ef)  
 (c) l ek/kku (d) l eizk

97. Which of the following has won French presidential election?  
 (a) Francois Hollande  
 (b) Nicolas Sarkozy  
 (c) Emmanuel Macron  
 (d) Le Pen
98. Who has been honoured with Woodrow Wilson Award 2017?  
 (a) Shikha Sharma  
 (b) Chanda Kochhar  
 (c) Indira Nooyi  
 (d) Arundhati Bhattacharya
99. In which of the following state, "Cordon And Combing" operation was launched recently?  
 (a) Jammu and Kashmir  
 (b) Chhattisgarh  
 (c) Assam  
 (d) Manipur
100. In whose memory, National Anti Terrorism Day is observed?  
 (a) Rajiv Gandhi  
 (b) Indira Gandhi  
 (c) Jawahar Lal Nehru  
 (d) M.K. Gandhi
97. bueal sfdl usYkd dsjk"Vfi fr puko ea thr glfl y dh gS  
 (a) YkUdkbl gkNySM  
 (b) fudkyI I jdksth  
 (c) beSuPy eDku  
 (d) yh i su
98. fdI 0; fDRk dks o"lz 2017 dk oMjks foYI u i gLdkj inku fd; k x; k gS  
 (a) f'k[kk 'kekZ  
 (b) plnk dkpj  
 (c) bflnj k ubZ  
 (d) v: U/krh HkVVkpk; kZ
99. bueal sfdl jkT; eagky eagh ^, d l ?ku ?kj kcnh rFkk ryk'kh\*\* vfilk; ku pyk; k x; k\   
 (a) tEEkw vlg d'ehj  
 (b) NÙkhl x<+  
 (c) vl e  
 (d) ef.ki g
100. fdI dh ; kn ea ^jk"Vh; vkradkn jkdk fnoI \* euk; k trrk gS  
 (a) jktho xk/kh  
 (b) bflnj k xk/kh  
 (c) tokgj yky ug:  
 (d) , e-ds xk/kh

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# TEST PAPER

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### वृत्त

- 1- ijh{k.k i kjEHk gkus ds rjUr ckn] vki bl ijh{k.k i qLrdk dh iMrky vo"; dj ya fd bl ea dkbZ fcuk Nikj QVk ; k NWk gpyk i'B vFkok iz'ukad vfn u gkA ; fn , d k gS rks bl sl gh ijh{k.k i qLrdk lscny yHft, A
- 2- -i ; k / ; ku j [kafd OMR mYkj&i=d eH mfor LFku ij] jky ueCj / ; ku l s , oafcuk fd l h pnd ; k fol xfr ds Hkjus vjS dWc) djus dh fEenkih mEehnokj dh gA fd l h Hkh izdkj dh pnd@fol xfr dh fLFkr ea mYkj&i=d fujLr dj fn ; k tk ; xkA
- 3- bl ijh{k.k i qLrdk ij l kfk ea fn , x , dksBd ea vki dks viuk vuqekad [redacted] fy[kuk gA ijh{k.k i qLrdk ij vjS dN u fy[kk
- 4- bl ijh{k.k i qLrdk ea dY 100 iz'ukad 1/2 u 1/2 fn , x , gS Hkx I & xfr] foKku vjS Hkx II - vxHj l keW; l prkA iR; d iz'ukad ea pkj iR; Ykj 1/2 mYkj 1/2 fn , x , gA buea l s , d iR; Ykj dks pu yH ft l s vki mYkj&i=d ij vdr djuk pkgrs gA ; fn vki dks , d k yxsf d , d l s vf/kd iR; Ykj l gh gS rks ml iR; Ykj dks vdr dja tks vki dks l okHe yxA iR; d iz'ukad ds fy , d gh iR; Ykj puuk gA
- 5- vki dks vius l Hkh iR; Rrj vyx l s fn , x , mRrj&i=d ij gh vdr djus gA mRrj&i=d ea fn , x , fun'k nf[k , A
- 6- CR; d c'ukak pkj 1/4 1/2 vad dk gA
- 7- bl l sigysfd vki ijh{k.k i qLrdk ds foHku iz'ukak ds iR; Rrj mRrj&i=d ij vdr djuk "kq dj] vki dks i d'sk i ek.k&i= ds l kfk i'kr vup'ska ds vuq kj dN foj.k mRrj&i=d ea nsus gA
- 8- vki vius l Hkh iR; Rrjka dks mRrj&i=d ea Hkjus ds ckn rFk ijh{k.k ds l ekiu ij dY mRrj&i=d v/kd dks l ki nA vki dks vius l kfk ijh{k.k i qLrdk ys tkus dh vuqfr gA
- 9- dPps dke ds fy , i=d ijh{k.k i qLrdk ds vUr ea l yXu gA
- 10- xyr mRrjka ds fy , n.M%

- oLrpu'B iz'u&i=ka ea mEehnokj }jkk fn , x , xyr mYkja ds fy , n.M fn ; k tk , xkA**
- (i) iR; d iz'u dsfy , pkj odfYir mRrj gA mEehnokj }jkk iR; d iz'u dsfy , fn , x , , d xyr mRrj dsfy , iz'u grqfu ; r fd , x , vadka dk , d 1/4 1/2 vad n.M ds : i ea dKvk tk , xkA
  - (ii) ; fn dkbZ mEehnokj , d l s vf/kd mRrj nsk gS rks bl s xyr mYkj ekuk tk , xk] ; | fi fn , x , mYkja ea l s , d mYkj l gh gk'k gS fQj Hkh ml iz'u dsfy , mi ; Prkuq kj gh ml h rjg dk n.M fn ; k tk , xkA
  - (iii) ; fn mEehnokj }jkk dkbZ iz'u gy ughafd ; k tkrk gS vFkr-mEehnokj }jkk mYkj ughafn ; k tkrk gS rks ml & iz'u dsfy , dkbZ n.M ughafn ; k tk , xkA

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