



# Sample Papers



# THE MOST AWAITED MOST RESPECTED BIGGEST

ADMISSION TEST OF THE YEAR FROM VMC



Vidyamandir Intellect Quest

FOR STUDENTS  
PRESENTLY IN CLASS



2 Year Program **NEET**

\*T&C apply

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**Sample Paper -2 Year Medical Program****Vidyamandir Intellect Quest Test****Duration : 3.0 Hrs****Maximum Marks : 480****GENERAL INSTRUCTIONS:**

- The paper contains 120 Objective Type Questions divided into four sections: **Section - I (Physics), Section - II (Chemistry), Section - III (Biology) and Section - IV (Mental Ability)**.
- **Section-I, II and III contain 35 Multiple Choice Questions each and Section-IV contains 15 Multiple Choice Questions.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE** is correct.

**MARKING SCHEME:**

- For each question in Section-I, II, III and IV, **4 marks** will be awarded for correct answer and **–1 negative marking** for incorrect answers.


**GENERAL INSTRUCTIONS:**

- For answering a question, an **ANSWER SHEET (OMR SHEET)** is provided separately. Please fill your **Name, Roll Number, Seat ID, Date of Birth** and the **PAPER CODE** properly in the space provided in the **ANSWER SHEET**. IT IS YOUR OWN RESPONSIBILITY TO FILL THE OMR SHEET CORRECTLY.
- The use of log tables, calculator and any other electronic device is strictly prohibited.
- Violating the examination room discipline will immediately lead to the cancellation of your paper and no excuses will be entertained.
- No one will be permitted to leave the examination hall before the end of the test.
- Please submit both the question paper and the answer sheet to the invigilator before leaving the examination hall.

**SUGGESTIONS:**

- Before starting the paper, spend 2-3 minutes to check whether all the pages are in order and report any issue to the invigilator immediately.
- Try to attempt the Sections in their respective order.
- Do not get stuck on a particular question for more than 1.5 - 2 minutes. Move on to a new question as there are 120 questions to solve.

**SECTION – I [PHYSICS]**

- The relation between magnification  $m$ , the object position  $u$  and focal length  $f$  of the mirror is:  
 (A)  $m = \frac{f-u}{f}$       (B)  $m = \frac{f}{f-u}$       (C)  $m = \frac{f+u}{f}$       (D)  $m = \frac{f}{f+u}$
- $v_1$  is velocity of light in first medium,  $v_2$  is velocity of light in second medium, then refractive index of second medium with respect to first medium is:  
 (A)  $v_1 / v_2$       (B)  $v_2 / v_1$       (C)  $\sqrt{v_1 / v_2}$       (D)  $\sqrt{v_2 / v_1}$
- A convex lens has a focal length  $f$ . It is cut into two parts along the dotted line as shown in the figure. The focal length of each part will be:  

 (A)  $\frac{f}{2}$       (B)  $f$       (C)  $\frac{3}{2}f$       (D)  $2f$
- The ratio of the refractive index of red light to blue light in air is:  
 (A) Less than unity  
 (B) Equal to unity  
 (C) Greater than unity  
 (D) Less as well as greater than unity depending upon the experimental arrangement
- The refractive index of glass and water with respect to air are  $3/2$  and  $4/3$  respectively. The refractive index of glass with respect to water is:  
 (A)  $8/9$       (B)  $9/8$       (C)  $2$       (D)  $1/2$
- If  $\mu_j$  represents refractive index when a light ray goes from medium  $i$  to medium  $j$ , then the product  ${}_2\mu_1 \times {}_3\mu_2 \times {}_4\mu_3$  is equal to:  
 (A)  ${}_3\mu_1$       (B)  ${}_3\mu_2$       (C)  $\frac{1}{{}_1\mu_4}$       (D)  ${}_4\mu_2$
- What is the basic reason for the shining of a diamond?  
 (A) Reflection      (B) Refraction  
 (C) Dispersion of light      (D) Total internal reflection

8. Total internal reflection of a ray of light is possible when the ( $i_c$  = critical angle,  $i$  = angle of incidence)
- (A) Ray goes from denser medium to rarer medium and  $i < i_c$   
 (B) Ray goes from denser medium to rarer medium and  $i > i_c$   
 (C) Ray goes from rarer medium to denser medium and  $i > i_c$   
 (D) Ray goes from rarer medium to denser medium and  $i < i_c$
9. A convex lens of focal length A and a concave lens of focal length B are placed in contact. The focal length of the combination is:
- (A)  $A + B$  (B)  $(A - B)$  (C)  $\frac{AB}{(A + B)}$  (D)  $\frac{AB}{(B - A)}$
10. Near and far points of a human eye are:
- (A) zero and 25 cm (B) 25 cm and 50 cm  
 (C) 50 cm and 100 cm (D) 25 cm and infinite
11. Which of the following is used in optical fibres?
- (A) Total internal reflection (B) Scattering  
 (C) Diffraction (D) Refraction
12. A plane glass slab is kept over various coloured letters; the letter which appears least raised is:
- (A) blue (B) violet (C) green (D) red
13. A convex lens is making full image of an object. If half of lens is covered by an opaque object, then:
- (A) half image is not seen (B) full image of same intensity is seen  
 (C) full image of decreased intensity is seen (D) half image of same intensity is seen
14. When a thin convex lens is put in contact with a thin concave lens of the same focal length ( $f$ ), the resultant combination has a focal length equal to:
- (A)  $f/2$  (B)  $2f$  (C) 0 (D)  $\infty$
15. A convex lens is made up of three different materials as shown in the figure. For a point object placed on its axis, the number of images formed is:



- (A) 1 (B) 3 (C) 4 (D) 5
16. Myopia is the defect of vision due to which a person finds difficulty in seeing
- (A) distant objects (B) near objects (C) objects at all distances (D) colours
17. Loss of the ability of eye to focus on near and far objects with advancing age is called
- (A) Presbyopia (B) Astigmatism (C) Hypermetropia (D) Myopia
18. Astigmatism can be corrected by
- (A) Bifocal lenses (B) Cylindrical lenses  
 (C) Concave lenses (D) Plano-convex lenses

19. A normal eye is not able to see objects closer than 25 cm because  
(A) The focal length of the eye is 25 cm  
(B) The distance of the retina from the eye lens is 25 cm  
(C) The eye is not able to decrease the distance between the eye lens and the retina beyond a limit  
(D) The eye is not able to decrease the focal length beyond a limit
20. Myopia can be removed by using a lens of  
(A) concave lens (B) convex lens (C) cylindrical lens (D) by surgical removal
21. 'Mirage' is a phenomenon due to:  
(A) reflection of light (B) refraction of light  
(C) total internal reflection of light (D) diffraction of light
22. When a ray of light enters a glass slab from air:  
(A) Its wavelength decreases. (B) Its wavelength increases.  
(C) Its frequency increases. (D) Neither wavelength nor frequency changes.
23. A person is looking at the image of his face in a mirror by holding it close to his face. The image is virtual. When he moves the mirror away from his face, the image is inverted. What type of mirror is he using?  
(A) Plane mirror (B) Convex mirror (C) Concave mirror (D) None of these
24. Two objects A and B when placed in front of a concave mirror of focal length 7.5 cm, give images of equal size. If A is three times the size of B and is placed 30 cm from the mirror, what is the distance of B from the mirror?  
(A) 10 cm (B) 12.5 cm (C) 15 cm (D) 17.5 cm
25. A lens of power +2.0D is placed in contact with another lens of power -1.0D, the combination will behave like:  
(A) A converging lens of focal length 100 cm  
(B) A diverging lens of focal length 100 cm  
(C) A converging lens of focal length 50 cm  
(D) A diverging lens of focal length 50 cm
26. Choose the wrong statement from the following:  
(A) To a fish under water looking obliquely at a man standing on the bank of lake, the man looks taller than his actual height.  
(B) The apparent depth of a tank of water is more for oblique viewing than for normal viewing.  
(C) The focal length of a concave mirror changes if it is immersed in water.  
(D) In no situation will a converging lens behave like a diverging lens.
27. A concave mirror produces a real image twice the size of the object when placed at a distance of 22.5 cm from it. At what distance from the mirror should the object be placed so that the image becomes three times the size of the object?  
(A) 20 cm (B) 25 cm (C) 30 cm (D) 40 cm
28. A light ray is made to incident on a glass plate with angle of incidence  $15^\circ$  and then reflected. Then the angle of deviation is:  
(A)  $45^\circ$  (B)  $130^\circ$  (C)  $150^\circ$  (D)  $90^\circ$
29. The angle between incident ray and reflected ray is  $70^\circ$ . What is the angle of incidence?  
(A)  $45^\circ$  (B)  $30^\circ$  (C)  $55^\circ$  (D)  $35^\circ$



30. Two plane mirrors are inclined to each other at an angle. A ray of light is reflected first at one mirror and then at the other.
- (A) the total deviation of ray is  $360^\circ$   
(B) the total deviation produced by system of mirrors is independent of the angle of incidence on the first mirror  
(C) the total deviation produced by system of mirrors depends upon the angle which the two mirror are inclined to each other.  
(D) the total deviation of ray is always  $90^\circ$
31. Light is focused on the compound wall of a building with the help of vertical plane mirror. A small boy came and rotate the plane mirror with an angle of  $30^\circ$  clock wise then what happens to the reflected beam?
- (A) remains fixed (B) rotates by  $15^\circ$  (C) rotates by  $60^\circ$  (D) rotates by  $90^\circ$
32. The diameter of spherical mirror in which reflection takes place is called:
- (A) radius of curvature (B) centre of curvature  
(C) linear aperture. (D) focal length.
33. A person cannot see distinctly objects kept beyond 2 m. This defect can be corrected by using a lens of power:
- (A)  $+0.5\text{ D}$  (B)  $-0.5\text{ D}$  (C)  $+0.2\text{ D}$  (D)  $-0.2\text{ D}$
34. A student sitting on the last bench can read the letters written on the blackboard but is not able to read the letters written in his text book. Which of the following statements is correct?
- (A) The near point of his eyes has receded away  
(B) The near point of his eyes has come closer to him  
(C) The far point of his eyes has come closer to him  
(D) The far point of his eyes has receded away
35. At noon the sun appears white as:
- (A) light is least scattered  
(B) all the colours of the white light are scattered away  
(C) blue colour is scattered the most (D) red colour is scattered the most

**SECTION – II [CHEMISTRY]**

36. Which of the following represents a double displacement reaction?
- (A)  $2\text{H}_2 + \text{O}_2 \longrightarrow 2\text{H}_2\text{O}$  (B)  $2\text{Mg} + \text{O}_2 \longrightarrow 2\text{MgO}$   
(C)  $\text{AgNO}_3 + \text{NaCl} \longrightarrow \text{AgCl} \downarrow + \text{NaNO}_3$  (D)  $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$
37. The reaction  $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$  is a:
- (A) Decomposition reaction (B) Combination reaction  
(C) Double displacement reaction (D) Displacement reaction
38. Which of the following is a decomposition reaction?
- (A)  $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$  (B)  $\text{NH}_4\text{CNO} \longrightarrow \text{H}_2\text{NCONH}_2$   
(C)  $2\text{KClO}_3 \longrightarrow 2\text{KCl} + 3\text{O}_2$  (D)  $\text{H}_2 + \text{I}_2 \longrightarrow 2\text{HI}$
39. Which of the following is a redox reaction?
- (A)  $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$  (B)  $\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$   
(C)  $\text{CaO} + 2\text{HCl} \longrightarrow \text{CaCl}_2 + \text{H}_2\text{O}$  (D)  $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$

40. The reaction  $C + O_2 \longrightarrow CO_2 + \text{Heat}$ ; is a/an:  
(A) Combination reaction (B) Oxidation reaction  
(C) Exothermic reaction (D) All of the above
41.  $Fe_2O_3 + 2Al \longrightarrow Al_2O_3 + 2Fe$ . This reaction is an example of:  
(A) Combination reaction (B) Double displacement reaction  
(C) Decomposition reaction (D) Displacement reaction
42. When Iron nails are added to an aqueous solution of copper sulphate, a chemical change occurs. Which of the following is not true about this reaction?  
(A) Blue colour of the solution fades (B) Iron nails become brownish in colour  
(C) It is a displacement reaction (D) Iron nails dissolve completely
43. 10 ml of a solution of NaOH is found to be completely neutralised by 8mL of a given solution of HCl. If we take 20 mL of the same solution of NaOH, the amount HCl solution (the same solution as before) required to neutralize it will be:  
(A) 4 mL (B) 8 mL (C) 12 mL (D) 16 mL
44. According to Arrhenius concept, an acid gives:  
(A)  $H^+$  in water (B)  $OH^-$  in water (C) Both (A) & (B) (D)  $OH^-$  in acid medium
45. Noble metals can dissolve in:  
(A) Conc.  $HNO_3$  (B) Conc. HCl (C) Conc.  $H_2SO_4$  (D) Aqua-regia
46. Soda ash is:  
(A)  $NaNO_3$  (B)  $Na_2CO_3$  (C) NaOH (D)  $NaHCO_3$
47. Which of the following is a basic salt?  
(A)  $SnCl_2$  (B) NaCl (C)  $NH_4Cl$  (D)  $CH_3COONa$
48.  $\text{Fats} + NaOH \longrightarrow \dots\dots + \text{Glycerol}$ . One of the products formed in this reaction is:  
(A) Soap (B) Cloth (C) Paper (D) Wood
49. Potash alum is a:  
(A) Simple salt (B) Complex salt (C) Acid salt (D) Double salt
50. What happens when copper rod is dipped in iron sulphate solution?  
(A) Copper displaces iron  
(B) Blue colour of copper sulphate solution is obtained  
(C) No reaction takes place (D) reaction is exothermic
51. Which of the following is true for Plaster of Paris?  
(A) It is obtained by adding water to calcium sulphate dihydrate  
(B) It is obtained by cooling gypsum to a very low temperature  
(C) It hardens on combination with water (D) It hardens by releasing out water
52. Which of the following is not true for Washing Soda?  
(A) It is the sodium salt of carbonic acid synthesized by a process known as Solvay's process  
(B) It is used as a bleach for fabrics such as cotton and linen  
(C) In its manufacture, ammonia is regenerated from ammonium chloride by treating it with lime  
(D) Used for softening hard water

53. Some stale food gives a bad taste and a bad smell because of:  
(A) Corrosion (B) Displacement (C) Heating (D) Rancidity
54. Quick lime (CaO-calcium oxide) reaction with water is regarded as exothermic. A student mixes these two products in a test tube and touches its side surface. Which of the following statement correctly describes the student's observation?  
(A) the test tube becomes cold due to release of heat.  
(B) the test tube becomes hot due to release of heat.  
(C) the test tube becomes hot due to absorption of heat.  
(D) the test tube becomes cold due to absorption of heat.
55. In the balanced equation  
 $a \text{Fe}_2\text{O}_3 + b \text{H}_2 \rightarrow c \text{Fe} + d \text{H}_2\text{O}$   
The values of  $a$ ,  $b$ ,  $c$  and  $d$  are the respectively:  
(A) 1, 1, 2, 3 (B) 1, 1, 1, 1 (C) 1, 3, 2, 3 (D) 1, 2, 2, 3
56. Identify the element which is most reactive.  
 $\text{A}_2\text{O}_3 + 2\text{B} \rightarrow \text{B}_2\text{O}_3 + 2\text{A}$   $3\text{CSO}_4 + 2\text{B} \rightarrow \text{B}_2(\text{SO}_4) + 3\text{C}$   
 $3\text{DO} + 2\text{A} \rightarrow \text{A}_2\text{O} + 3\text{D}$   
(A) A (B) B (C) D (D) None of these
57. What are (x) and (y) in the following reaction respectively?  
 $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + (\text{x}) + (\text{y})$   
(A)  $\text{Cl}_2$  and  $\text{H}_2\text{O}$  (B)  $\text{Cl}_2$  and  $2\text{H}_2\text{O}$  (C)  $3\text{Cl}_2$  and  $2\text{H}_2\text{O}$  (D)  $\text{Cl}_2$  and  $2\text{H}_2$
58. The chemical reaction between quicklime and water is characterized by:  
(A) evolution of hydrogen gas (B) formation of slaked lime precipitate  
(C) lowering in temperature of mixture (D) change in colour of the product
59. Which one of the following is an endothermic reaction?  
(A) combustion of carbon (B) adding ammonium chloride to water  
(C) reaction between NaOH and HCl (D) reaction between  $\text{Ca}(\text{OH})_2$  and  $\text{H}_2\text{SO}_4$
60. One of the following does not happen during a chemical reaction. This is:  
(A) breaking of old chemical bonds and formation of new chemical bonds  
(B) formation of new substance with different properties  
(C) atoms of one element change into those of another element to form new products  
(D) a rearrangement of atoms takes place to form new products.
61. Barium chloride on reacting with ammonium sulphate forms barium sulphate and ammonium chloride. Which of the following correctly represents the type of reaction involved?  
(i) Displacement reaction (ii) Precipitation reaction  
(iii) Combination reaction (iv) Double displacement reaction  
(A) (i) only (B) (ii) only (C) (iv) only (D) (ii) & (iv)
62. Change of  $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$  to  $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$  on exposure to air is called:  
(A) Efflorescence (B) Effervescence (C) Fluorescence (D) Luminescence
63. Rusting of iron is a chemical reaction. The reaction can be termed as  
(A) Displacement (B) combination  
(C) Double decomposition (D) substitution



64. In which of the following reaction 'Zn' undergo oxidation?  
(A)  $\text{Zn}^{2+} + 2\text{e}^- \rightarrow \text{Zn}$  (B)  $\text{H}_2 \rightarrow 2\text{H}^+ + 2\text{e}^-$   
(C)  $2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$  (D)  $\text{Zn} \rightarrow \text{Zn}^{2+} + 2\text{e}^-$
65. The formula for rust is:  
(A) CuO (B)  $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$  (C)  $\text{AgNO}_3$  (D) AgS
66. In the reaction  $\text{PbO} + \text{C} \rightarrow \text{Pb} + \text{CO}$   
(A) PbO is oxidized (B) C acts as an oxidizing agent  
(C) C acts as a reducing agent. (D) This reaction does not represent redox reaction
67. When copper wire is put in a solution of  $\text{AgNO}_3$  :  
(A) copper metal is displaced  
(B) the colourless solution turns blue  
(C) the copper metal is deposited on the silver  
(D) all the above
68. Following reaction represents a redox reaction in this process  $2\text{Na} + \text{Cl}_2 \rightarrow 2\text{NaCl}$  :  
(A) Na get oxidized (B)  $\text{Cl}_2$  get oxidized  
(C)  $\text{Cl}_2$  is oxidizing agent (D) Both (A) and (C)
69. According to electronic concept:  
(A) Oxidation is gain of electron(s)  
(B) Electron donating species is called oxidizing agent  
(C) Reduction is gain of electron(s)  
(D) Electron accepting species is called reducing agent
70. During the reaction of Zn with  $\text{H}_2\text{SO}_4$  :  
(A) Zn loses electrons (B) Zn gains electrons  
(C) Zn get reduced (D) Both (B) and (C)

**SECTION – III [BIOLOGY]**

71. Which of the following statement is true regarding nutrients?  
(A) It is organic in nature only, required for life processes  
(B) Both organic and inorganic in nature. Required for life process.  
(C) They do not provide energy in any form  
(D) Their deficiency has no effect
72. Nutrition is a process of:  
(A) Intake of food only (B) Absorption of water  
(C) Intake as well as utilization of nutrients (D) Elimination of food and gases
73. Which of the following is a preferred source of energy for living organism?  
(A) Carbohydrate (B) protein (C) fat (D) Minerals

74. Fats are preferred for storage by animals because:  
(A) It has high oxygen content and get oxidized easily  
(B) Require very less amount of oxygen for its oxidation.  
(C) require  $\text{CO}_2$  for its oxidation  
(D) It has low  $\text{O}_2$  content and require amount of  $\text{O}_2$  for its oxidation.
75. Find the odd one with respect to autotrophic nutrition:  
(A) require  $\text{CO}_2$  as source of carbon  
(B) require organic compound as source of carbon  
(C)  $\text{H}_2\text{O}$  can be used as source of electron  
(D) require sunlight for energy
76. How do decomposers obtain their nutrients.  
(A) By simple intake of food and then digestion  
(B) Digestion primarily outside of the body and then absorbed digested food.  
(C) Absorbed food in solution form and then digestion within body.  
(D) Feed on other living organisms
77. Which one of the following is parasitic plant?  
(A) Dodder (B) Lotus (C) Trypanosoma (D) Plasmodium
78. What is correct regarding photosynthesis?  
(A) Conversion of  $\text{CO}_2$  into Glucose in presence of sunlight  
(B) Fixation of inorganic carbon into organic carbon with the help of solar energy.  
(C) Fixation of organic compound into more complex organic compound  
(D) (A) and (B)
79. In given following reaction find the source of oxygen  
$$\text{CO}_2 + \text{H}_2\text{O} \xrightarrow[\text{Sun light}]{\text{Chlorophyll}} \text{C}_6\text{H}_{12}\text{O}_6 + \text{H}_2\text{O} + \text{O}_2 \uparrow$$
  
(A)  $\text{CO}_2$  (B)  $\text{H}_2\text{O}$  (C) Both  $\text{CO}_2$  and  $\text{H}_2\text{O}$   
(D) Chlorophyll
80. Oxygen evolution takes place during:  
(A) Light independent reaction (B) Calvin cycle  
(C) Bio-synthetic reaction (D) Photochemical reaction
81. Which of the products of light dependent reaction?  
(A)  $\text{NADPH}_2$  only (B)  $\text{NADH}_2 + \text{ATP}$   
(C)  $\text{NADPH}_2 + \text{ATP}$  (D) ATP only
82. Assimilatory power is \_\_\_\_\_.  
(A)  $\text{NADPH}_2 + \text{ATP} + \text{O}_2$  (B)  $\text{NADPH}_2 + \text{ATP}$   
(C) ATP only (D)  $\text{NADPH}_2$  only
83. Find the correct sequence of process in light reaction:  
(A) Absorption of sunlight by chlorophyll  $\rightarrow$  Photolysis of water  $\rightarrow$  Production of Assimilatory power.  
(B) Photolysis of water  $\rightarrow$  Absorption of sunlight by chlorophyll  $\rightarrow$  Production of  $\text{NADPH}_2 + \text{ATP}$   
(C) Breaking up of water  $\rightarrow$  Production of Assimilatory power  $\rightarrow$  Producing of Glucose  
(D) Photolysis  $\rightarrow$  Calvin cycle  $\rightarrow$  Respiration

84. Which reaction correctly represents photolysis of water during light reaction?  
(A)  $\text{H}_2\text{O} \rightarrow \text{H}^+ + \text{OH}^-$  (B)  $2\text{H}_2\text{O} + 4\text{H}^+ + 4\text{e}^- + \text{O}_2$   
(C)  $\text{H}_2\text{O} \rightarrow \text{H}_2 + [\text{O}_2^-]$  (D)  $\text{H}_2\text{O} \rightarrow 2\text{H}^+ + [\text{O}^-]$
85. What is phosphorylation?  
(A) Production of energy rich phosphorus (B) Production of energy deficient ADP molecule  
(C) Production of energy rich ATP molecule (D) formation of ATP by breaking ADP.
86. Oxidative phosphorylation is different from photophosphorylation as:  
(A) It produces ADP by using solar energy (B) It produces ATP by using solar energy  
(C) It produces ADP from ATP  
(D) It produces ATP by using energy released during chemical oxidation
87. Primary  $\text{CO}_2$  acceptor in Calvin cycle ( $\text{C}_3$  – Cycle) is:  
(A) RuBP (B)  $\text{NADPH}_2$  (C) ATP (D) PGA
88. Which of the following has parasitic mode of nutrition?  
(A) Elephant (B) Tape worm (C) Pig (D) Vulture
89. Which of the following enzyme helps in digestion of sugars in buccal cavity?  
(A) Pepsin (B) Rennin (C) Amylase (D) Lipase
90. How many milk teeth (deciduous or temporary teeth) does a human have?  
(A) 32 (B) 30 (C) 12 (D) 20
91. The longest part of the large intestine is known as:  
(A) Duodenum (B) Jejunum (C) Rectum (D) Colon
92. The Bile juice is released in small intestine from gall bladder, which part of food does it help to digest?  
(A) Sugars (B) Nucleic Acids (C) Vitamin C (D) Fats
93. Which of the following disorders is caused due to deficiency of vitamin A?  
(A) Cataract (B) Scurvy  
(C) Night Blindness (D) Color blindness
94. Where does the major exchange of gases take place with the blood stream in the lungs?  
(A) Alveoli (B) Nasal Chamber  
(C) Trachea (D) Bronchioles
95. Rhythmic contraction of which muscles associated with ribs help in respiration?  
(A) Muscles of Diaphragm (B) Inter Costal Muscles  
(C) Muscles of stomach (D) Both (A) and (B)
96. In which organelle does the 3 carbon compound pyruvic acid break to form Carbon-dioxide, water and ATP?  
(A) Endoplasmic reticulum (B) Golgi Body  
(C) Mitochondria (D) Lysosome
97. When ATP is hydrolysed into ADP and  $\text{P}_i$  in presence of water, how much energy is released?  
(A) 15.5kJ (B) 30.5kJ (C) 60.5kJ (D) 90.5kJ

98. Why  $\text{CO}_2$  is transported in dissolved state in plasma more as compared to  $\text{O}_2$  dissolved in plasma?  
(A)  $\text{O}_2$  has higher molecular weight than  $\text{CO}_2$   
(B)  $\text{CO}_2$  has more affinity for hemoglobin than  $\text{O}_2$   
(C)  $\text{CO}_2$  is more soluble in blood plasma than  $\text{O}_2$   
(D)  $\text{CO}_2$  being higher in Inspired air is dissolved more
99. Which animal among the following has more number of auricles than adult Frog?  
(A) Fishes (B) Man (C) Crocodile (D) None
100. Which blood vessel transports deoxygenated blood collected from body into the right chamber of heart?  
(A) Venacava (B) Pulmonary Vein  
(C) Pulmonary Artery (D) Aorta
101. The value of Systolic Pressure in a healthy human Being is:  
(A) 80mmHg (B) 120mm Hg (C) 80 Pascal (D) 20 Pascal
102. Which of the following structure is not the part of human excretory system?  
(A) Uriniferous tubule (B) Uterus  
(C) Ureter (D) Urethra
103. Which of the following structure is responsible for reabsorption of water?  
(A) Ureter (B) Tubular part of nephron  
(C) Bowman's Capsule (D) Glomerulus
104. In which of the following animals, blood goes only once through the heart in one cycle of passage through the body?  
(A) Birds (B) Amphibians (C) Fishes (D) Mammals
105. Artificial filtration of blood through a machine is termed as:  
(A) Kidney Transplant (B) Kidney Grafting  
(C) Hemodialysis (D) Nephritis



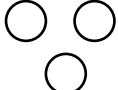
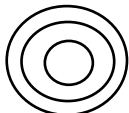
#### SECTION – IV [MENTAL ABILITY]

Directions for Q. Nos. 106 to 108:

Raju is a carpenter. He has five tools with which he works. They are A, B, C, D and E. Each of them has a different weight as given below:

- (i) A weighs twice as much as B
- (ii) B weighs four and half as much as D
- (iii) C weighs half as much as D
- (iv) D weighs half as much as E
- (v) E weighs less than A but more than C

106. Which of the following is the most light in weight?  
(A) A (B) D (C) B (D) C
107. Which of the following is most heavy in weight?  
(A) A (B) B (C) C (D) D

108. Which of the following represents the descending order of weights of tools?  
(A) B, D, E, A, C (B) A, B, E, D, C (C) B, D, E, C, A (D) E, C, D, A, B
109. Nisha returned home three days earlier than the time she had told her mother, her sister Joya reached five days later than the day Nisha was supposed to return. If Joya returned on Thursday on what day did Nisha return?  
(A) Tuesday (B) Wednesday (C) Saturday (D) Friday
110. Bablu has Rs. 480 in the denominations of one rupee notes, five rupee notes and ten rupee notes. The number of notes of each denomination is equal. What is the total no. of notes that he has?  
(A) 45 (B) 90 (C) 60 (D) 75
111. Five boys took part in a race. Raj finished before Mohit but behind Gaurav. Ashish finished before Sanchit but behind Mohit. Who won the race?  
(A) Raj (B) Gaurav (C) Mohit (D) Ashish
112. Leela's score is higher than Madhu. Shabnam's score is lower than Seema. Nisha's score is higher than Seema but lower than Madhu. Who among them scores the highest?  
(A) Leela (B) Madhu (C) Shabnam (D) Seema
113. Ravi's age is just double to the age of Mohan. Shyam is 3 years younger to Ravi. If Mohan's age is 5 years, then the age of Shyam will be:  
(A) 5 years (B) 7 years (C) 8 years (D) 6 years
114. Pointing to a photograph, a man said, "I have no brother or sister but that man's father is my father's son". Whose photograph was it?  
(A) His nephews (B) His father's (C) His son's (D) His own
115. Ram is the brother of Deepak, Sunita is sister of Rajesh, Deepak is the son of Sunita. How is Ram related to Sunita?  
(A) Son (B) Brother (C) Nephew (D) Father
116. Which of the following diagrams indicates the best relation between Mercury, Zinc and Metal?  
(A)  (B)  (C)  (D) 
117. A girl is facing south. She turns  $60^\circ$  in the clockwise direction and then turns  $105^\circ$  in the anticlockwise direction. In which direction is she now facing?  
(A) South – East (B) East (C) North – East (D) South–West
118. A watch reads 4 : 30. If the minute-hand points to East, in which direction does the hour-hand point?  
(A) North – East (B) South – East (C) North – West (D) North
119. A man walked 3 metre towards north, turned west and walked 2 metre then turned north and walked 1 metre and finally turned east and walked 5 metre. How far is he from the starting point?  
(A) 5 metre (B) 8 metre (C) 10 metre (D) 12 metre
120. A friend of mine came to meet me every Sunday. The first time he came at 12 : 30; the next time at 1 : 20, then at 2 : 30, then at 4.00 when did he turn up the time after that?  
(A) 4.30 (B) 5.50 (C) 5.30 (D) 5.20



SPACE FOR ROUGH WORK



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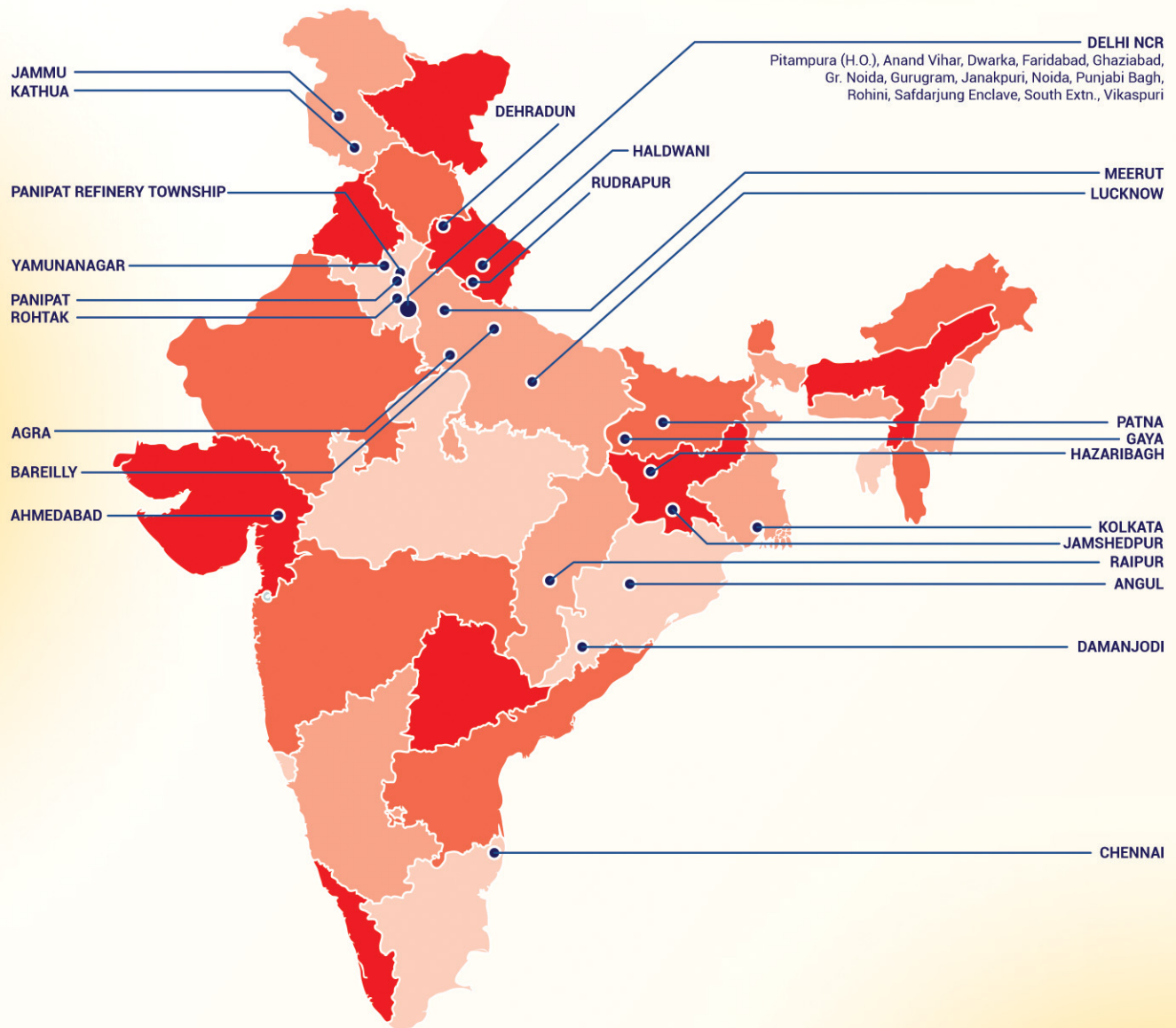
## 2 Year Medical Sample Paper | Answer Key

S. No.	Code - A Answer Key	Code A Difficulty	Code-A Subject	Chapter Name	Code-A Skill	Code-A +ve marks	Code-A -ve marks
1	B	Easy	Physics	Light reflection and refraction	Application	4	1
2	A	Medium	Physics	Light reflection and refraction	Application	4	1
3	D	Easy	Physics	Light reflection and refraction	Conceptual	4	1
4	A	Easy	Physics	Light reflection and refraction	Conceptual	4	1
5	B	Medium	Physics	Light reflection and refraction	Numerical	4	1
6	C	Difficult	Physics	Light reflection and refraction	Application	4	1
7	D	Easy	Physics	Light reflection and refraction	Memory	4	1
8	B	Medium	Physics	Light reflection and refraction	Conceptual	4	1
9	D	Medium	Physics	Light reflection and refraction	Application	4	1
10	D	Easy	Physics	Human Eye and Colourful world	Memory	4	1
11	A	Difficult	Physics	Light reflection and refraction	Conceptual	4	1
12	B	Difficult	Physics	Light reflection and refraction	Conceptual	4	1
13	C	Easy	Physics	Light reflection and refraction	Application	4	1
14	D	Easy	Physics	Light reflection and refraction	Application	4	1
15	B	Easy	Physics	Light reflection and refraction	Conceptual	4	1
16	A	Easy	Physics	Human Eye and Colourful world	Conceptual	4	1
17	A	Easy	Physics	Human Eye and Colourful world	Conceptual	4	1
18	B	Easy	Physics	Human Eye and Colourful world	Conceptual	4	1
19	D	Easy	Physics	Human Eye and Colourful world	Memory	4	1
20	A	Easy	Physics	Human Eye and Colourful world	Conceptual	4	1
21	C	Easy	Physics	Light reflection and refraction	Conceptual	4	1
22	A	Medium	Physics	Light reflection and refraction	Conceptual	4	1
23	C	Easy	Physics	Light reflection and refraction	Conceptual	4	1
24	C	Easy	Physics	Light reflection and refraction	Conceptual	4	1
25	A	Easy	Physics	Light reflection and refraction	Memory	4	1
26	C	Medium	Physics	Light reflection and refraction	Conceptual	4	1
27	A	Medium	Physics	Light reflection and refraction	Conceptual	4	1
28	C	Easy	Physics	Light reflection and refraction	Conceptual	4	1
29	D	Easy	Physics	Light reflection and refraction	Conceptual	4	1
30	C	Easy	Physics	Light reflection and refraction	Conceptual	4	1
31	C	Easy	Physics	Light reflection and refraction	Memory	4	1
32	C	Medium	Physics	Light reflection and refraction	Memory	4	1
33	B	Medium	Physics	Human Eye and Colourful world	Conceptual	4	1
34	A	Easy	Physics	Human Eye and Colourful world	Memory	4	1
35	A	Easy	Physics	Light reflection and refraction	Conceptual	4	1
36	C	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1
37	B	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1
38	C	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1
39	B	Easy	Chemistry	Chemical Reactions and Equations	Application	4	1
40	D	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
41	D	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1

S. No.	Code - A Answer Key	Code A Difficulty	Code-A Subject	Chapter Name	Code-A Skill	Code-A +ve marks	Code-A -ve marks
42	D	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1
43	D	Moderate	Chemistry	Acids, Bases and Salts	Calculation	4	1
44	A	Difficult	Chemistry	Acids, Bases and Salts	Conceptual	4	1
45	D	Easy	Chemistry	Acids Bases and Salts	Memory	4	1
46	B	Easy	Chemistry	Acids, Bases and Salts	Memory	4	1
47	D	Moderate	Chemistry	Acids, Bases and Salts	Application	4	1
48	A	Easy	Chemistry	Acids, Bases and Salts	Conceptual	4	1
49	D	Easy	Chemistry	Acids, Bases and Salts	Memory	4	1
50	C	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1
51	C	Easy	Chemistry	Acids Bases & Salts	Conceptual	4	1
52	B	Easy	Chemistry	Acids Bases & Salts	Conceptual	4	1
53	D	Easy	Chemistry	Chemical Reactions and Equations	Application	4	1
54	B	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
55	C	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
56	C	Medium	Chemistry	Chemical Reactions and Equations	Application	4	1
57	B	Easy	Chemistry	Chemical Reactions and Equations	Conceptual	4	1
58	B	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
59	B	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
60	B	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
61	D	Easy	Chemistry	Acids Bases & Salts	Conceptual	4	1
62	A	Easy	Chemistry	Acids, Bases & Salts	Conceptual	4	1
63	B	Easy	Chemistry	Chemical Reactions and Equations	Application	4	1
64	D	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
65	B	Easy	Chemistry	Acids, Bases and Salts	Memory	4	1
66	C	Difficult	Chemistry	Chemical Reactions and Equations	Memory	4	1
67	B	Easy	Chemistry	Chemical Reactions and Equations	Application	4	1
68	D	Easy	Chemistry	Chemical Reactions and Equations	Application	4	1
69	C	Easy	Chemistry	Chemical Reactions and Equations	Memory	4	1
70	A	Easy	Chemistry	Acids, Bases and Salts	Memory	4	1
71	B	Medium	Biology	life Process	Conceptual	4	1
72	C	Easy	Biology	life Process	Memory	4	1
73	A	Easy	Biology	life Process	Application	4	1
74	D	Easy	Biology	life Process	Memory	4	1
75	B	Difficult	Biology	life Process	Memory	4	1
76	B	Easy	Biology	life Process	Memory	4	1
77	A	Easy	Biology	life Process	Memory	4	1
78	D	Easy	Biology	life Process	Memory	4	1
79	B	Moderate	Biology	life Process	Conceptual	4	1
80	D	Moderate	Biology	life Process	Conceptual	4	1
81	C	Easy	Biology	life Process	Memory	4	1
82	B	Moderate	Biology	life Process	Memory	4	1
83	A	Easy	Biology	life Process	Memory	4	1

S. No.	Code - A Answer Key	Code A Difficulty	Code-A Subject	Chapter Name	Code-A Skill	Code-A +ve marks	Code-A -ve marks
84	B	Easy	Biology	life Process	Memory	4	1
85	C	Moderate	Biology	life Process	Memory	4	1
86	D	Easy	Biology	life Process	Memory	4	1
87	A	Easy	Biology	life Process	Memory	4	1
88	B	Easy	Biology	life Process	Memory	4	1
89	C	Easy	Biology	life Process	Memory	4	1
90	D	Easy	Biology	life Process	Memory	4	1
91	D	Moderate	Biology	life Process	Memory	4	1
92	D	Moderate	Biology	life Process	Conceptual	4	1
93	C	Easy	Biology	life Process	Application	4	1
94	A	Easy	Biology	life Process	Memory	4	1
95	B	Easy	Biology	life Process	Memory	4	1
96	C	Moderate	Biology	life Process	Application	4	1
97	B	Moderate	Biology	life Process	Application	4	1
98	C	Easy	Biology	life Process	Conceptual	4	1
99	D	Moderate	Biology	life Process	Conceptual	4	1
100	A	Difficult	Biology	life Process	Application	4	1
101	B	Moderate	Biology	life Process	Conceptual	4	1
102	B	Easy	Biology	life Process	Conceptual	4	1
103	B	Easy	Biology	life Process	Memory	4	1
104	C	Moderate	Biology	life Process	Memory	4	1
105	C	Easy	Biology	life Process	Memory	4	1
106	D	Easy	Mental Ability	Logical Deduction	Application	4	1
107	A	Easy	Mental Ability	Logical Deduction	Conceptual	4	1
108	B	Medium	Mental Ability	Logical Deduction	Application	4	1
109	B	Easy	Mental Ability	Relations	Application	4	1
110	B	Medium	Mental Ability	Counting	Application	4	1
111	B	Easy	Mental Ability	Logical Deduction	Conceptual	4	1
112	A	Medium	Mental Ability	Logical Deduction	Application	4	1
113	B	Easy	Mental Ability	Mathematical logic	Application	4	1
114	D	Medium	Mental Ability	Relations	Conceptual	4	1
115	A	Easy	Mental Ability	Relations	Conceptual	4	1
116	B	Easy	Mental Ability	Venn Diagram	Application	4	1
117	A	Easy	Mental Ability	Direction sense	Conceptual	4	1
118	A	Difficult	Mental Ability	Time logic	Application	4	1
119	A	Easy	Mental Ability	Direction sense	Conceptual	4	1
120	B	Easy	Mental Ability	Logical Deduction	Application	4	1

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