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**BPKIHS**

**Model Entrance Exam**

**2075**

(Set-XXXII)

Date: 2075/04/26

**Hints and Solutions**

NAME

Solutions for BPKIHS Model Entrance Exam set -XXXII (2075-04-26)

Physics

1. a)
2. a)
3. a)  $v = 4t - 3t^2$   $\langle \vec{v} \rangle_{0-2} = \frac{\vec{s}_{0-2}}{2-0} = \frac{\int_0^2 v dt}{2} = \frac{1}{2} \int_0^2 (4t - 3t^2) dt = 0$
4. d) Time of descent > time of ascent.
5. a) [Inductance] =  $\left[ \frac{\text{energy}}{\text{current}} \right] = [ML^2T^{-2}A^{-2}]$
6. c)  $\tan\theta = \frac{4H}{R} = \frac{4H}{2H} = 2 \Rightarrow \frac{V_y}{V_x} = 2 \Rightarrow \frac{b}{a} = 2 \quad \therefore b = 2a$
7. a) The L.G. of the tube will be at length  $L/2$ . So radius  $r = L/2$ .  
 $F = M\omega^2 r = \frac{M\omega^2 L}{2}$
8. c)  $u_{rel} = 100$        $a_{rel} = 0$        $V_{rel} = u_{rel} + a_{rel} \times t = 100 + 0 = 100$  m/s
9. d)  $F = 2\rho Av^2 \cos\theta = 2 \times 10^3 \times 2 \times 10^{-4} \times 10^2 \cos 60^\circ = 20$  N
10. a)  $\frac{x}{L} = \frac{\mu}{\mu + 1} \times 100\% = \frac{0.25}{0.25 + 1} \times 100 = 20\%$
11. b)  $\frac{\Delta E}{E_1} = \frac{4m_1 m_2}{(m_1 + m_2)^2} = \frac{4m \times 2m}{(m + 2m)^2} = \frac{8}{9}$
12. d)  $F \propto R^{-5/2}$        $F \propto \frac{1}{R^{5/2}}$        $F \propto \frac{1}{R^n} \therefore n = \frac{5}{2}$   
 $T \propto R^{\frac{n+1}{2}}$        $T \propto R^{\frac{5/2+1}{2}}$        $T \propto R^{\frac{7}{4}}$
13. a) When a solid sphere is replaced by hollow sphere of same material and same mass, the size of the hollow sphere should be bigger, i.e. its effective length increases and hence the time period increases.
14. b)  $I = MK^2 = MR^2$
15. d) Rolling is not possible in absence of friction in an inclined plane.
16. a)  $K = Yr_0 = 2 \times 10^{11} \times 3 \times 10^{-10} = 60$  N/m
17. b)  $\frac{\text{surface energy of big drop}}{\text{surface energy of } n \text{ drops}} = \frac{1}{n^{1/3}} = \frac{1}{1000^{1/3}} = \frac{1}{10}$
18. b)  $\frac{8m}{m} = \frac{\frac{4}{3}\pi R^3 \rho}{\frac{4}{3}\pi r^3 \rho} \Rightarrow R = 2r$       As  $v \propto r^2$   
 $\frac{v_1 \left(\frac{R}{r}\right)^2}{v \left(\frac{r}{r}\right)^2} = \left(\frac{2r}{r}\right)^2 = 4$        $v_1 = 4v$
19. b)  $L_{20} = L_0 [1 + \alpha (0 - 20)] = L_0 [1 - 20\alpha]$   
 $L_{20} = 25 (1 - 20\alpha) < 25$  cm
20. b) B.p  $\propto$  pressure
21. d) Mean K.E. per molecule of a gas is a function of temperature only.
22. c)
23. b) If  $\rho_{H_2} = 1$  then  $\rho_{mix} = \frac{4 \times 1 + 1 \times 16}{4 + 1} = 4$

$$\frac{v_{\text{mix}}}{v_{\text{H}_2}} = \sqrt{\frac{\rho_{\text{H}_2}}{\rho_{\text{mix}}}} = \sqrt{\frac{1}{4}} = \frac{1}{2}$$

$$v_{\text{mix}} = \frac{v_{\text{H}_2}}{2} = \frac{1224}{2} = 612 \text{ m/s}$$

24. d)  $2d = v(t_1 + t_2) = 340(1.5 + 2.5)$ ,  $d = 680 \text{ m}$

25. c) When B is loaded its frequency decreases.  $\therefore$  its previous frequency was greater than of A.

$$250 + 4 = 254 \text{ Hz}$$

26. b) Sound travels fastest in granite because it is hard solid.

27. a)  $n = \frac{360^\circ}{\theta} - 1 = \frac{360^\circ}{60^\circ} - 1 = 5$

28. c)  $\frac{1}{f} = \frac{1}{D} - \frac{1}{x}$        $\frac{1}{f} = \frac{1}{25} - \frac{1}{40} = \frac{8-5}{200} = \frac{3}{200}$

$$f = \frac{200}{3} \text{ cm} = \frac{2}{3} \text{ m} \quad P = \frac{1}{f} = \frac{3}{2} D = 1.5 D$$

29. c)

30. a)

31. a)

32. c)  $F = \frac{1}{4\pi\epsilon_0\epsilon_r} \frac{q_1q_2}{r^2}$

For brass-sheet,  $\epsilon_r = 0$

$$F = \infty$$

33. a)  $B = \frac{\mu_0 I}{2\pi r}$        $2\pi r = n 2\pi r'$        $\therefore r' = \frac{r}{n}$        $B' = \frac{\mu_0 n I}{2\pi r'} = n^2 B$

34. b)  $W = q dv = 1 \times 2 = 2 \text{ J}$

35. b)

36. c)  $\frac{N}{N_0} = \left(\frac{1}{2}\right)^n \Rightarrow \frac{1}{16} = \left(\frac{1}{2}\right)^n \Rightarrow \left(\frac{1}{2}\right)^4 = \left(\frac{1}{2}\right)^n$

$$n = 4 \quad T_{1/2} = \frac{t}{n} = \frac{2}{4} = \frac{1}{2} \text{ hr} = 30 \text{ min}$$

37. b)

38. a)

39. c) The wavelength of characteristic X-ray depends upon the nature of material of the target, i.e. atomic number of target.

40. d)  $V = \frac{C}{137} \times \frac{Z}{n}$       For H-atom,  $Z = 1$ ,  $n = 1$

$$V = \frac{C}{137}$$

41. c)

42. b)

43. c)  $\frac{1}{C_s} = \frac{1}{4} + \frac{1}{4} = \frac{1}{2}$

$$C_s = 2 \mu\text{F}$$

$$C_p = 2 + 4 = 6 \mu\text{F}$$

44. a)  $\theta_1 = 0^\circ$        $\theta_2 = 90^\circ$

$$W = PE (\cos\theta_1 - \cos\theta_2) = PE (\cos 0^\circ - \cos 90^\circ) = PE$$

45. b)  $I = \frac{E}{R+r} = \frac{10}{3+2} = 2 \text{ A}$

$$\text{Potential gradient} = \frac{V}{l} = \frac{IR}{l} = \frac{2 \times 3}{500} = 12 \times 10^{-3} = 12 \text{ mv/cm}$$

46. c)  $R = \frac{\rho l}{A} = \frac{\rho l^2}{V}$        $R \propto l^2$

$$\% \Delta R = 2\% \Delta l = 2 \times 2\% = 4\%$$

47. b)

48. a)

49. b)  $\theta_n = \frac{\theta_i + \theta_c}{2} = \frac{10 + 530}{2} = 270^\circ\text{C}$

50. c)  $V = E - Ir = E - \frac{E}{R+r} r = 6 - \frac{6}{8+2} \times 2 = 4.8 \text{ V}$

### Chemistry

51. d)  $\frac{V_1}{V_2} = \sqrt{\frac{M_2}{M_1}}$  or  $\frac{50}{40} = \sqrt{\frac{M}{64}}$  or  $M = \frac{50 \times 50 \times 64}{40 \times 40} = 100$ .

52. a) Soap sol contains negative charged ionic micelles.

53. d)  $\text{K}_4[\text{Fe}(\text{CN})_6]$  is not the reagent for  $\text{Mg}^{2+}$ .

54. c) Higher the oxidation number, higher will be the acidic character.

55. a) Solutions containing equimolar concentrations of weak acid and its salt, pH is equal to  $\text{pK}_a$ .

$$\text{pH} = \text{pK}_a + \log \frac{[\text{Salt}]}{[\text{Acid}]} = \text{pK}_a$$

56. d)  $\text{H}^+$  comes from carbonic acid which acts as an electrolytic solution for set up of galvanic cell on the surface of iron metal in which  $\text{H}^+$  gain electron which comes from anodic part.

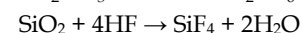
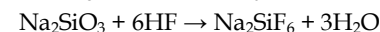
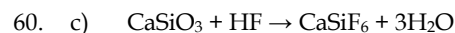
57. c) Unit of cell of ZnS  $\Rightarrow$  it is fcc with respect to  $\text{S}^{2-}$  ions in which  $\text{Zn}^{2+}$  is distributed in alternate tetrahedral holes.

$$\text{Here, No of cations} = 4$$

$$\text{No of anions} = 8 + 6 = 14$$

58. d) The potential of galvanic cell depends upon temperature, valency of metal electrodes & concentration of electrolytic solutions.

59. a) Here, number of moles of products is less than the number of moles of reactants.



This action of hydrofluoric acid on silica and silicates is used for etching glass.

61. d)  $\Delta T_f = K_f \times m = K_f \times \frac{a \times 1000}{b \times m}$

$$T_{\text{water}} - T_{\text{solution}} = K_f \times \frac{a \times 1000}{b \times m}$$

Here,  $a = 6.8 \text{ gm}$

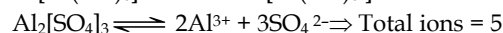
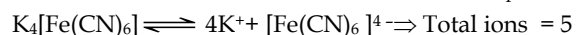
$b = 100 \text{ gm}$

$T_{\text{solution}} = -0.93$

$T_{\text{water}} = 0$

$$\therefore 0 - (-0.93) = 1.86 \times \frac{6.8 \times 1000}{100 \times m} \quad \therefore M = 136.$$

62. a) Van't Hoff factor  $i = \frac{\text{No. of moles of solute after dissociation or association}}{\text{Total no. of solute present}}$



$\therefore$  for both case  $i = 5/1 = 5$ .

63. a) Oxide ions have ccp arrangement so,  $O = 4$

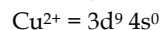
$$\text{Now, } A = \frac{1}{8} \times 2 \times 4 = 1$$

$$B = \frac{1}{2} \times 14 = 2$$

$\therefore A : B : O = 1 : 2 : 4$

$\therefore$  The formula is  $AB_2O_4$

64. d) In  $CuO$ ,  $Cu$  is in +2 State



Since, d- orbital contains one unpaired e-, it is paramagnetic.

65. c) In standard state  $\Delta H_f = 0$  and  $\Delta G_f = 0$  but  $\Delta S$  cannot be zero.

66. c) At. wt. of Co, Ni, Fe are 58.94, 58.69 and 55.85 respectively.

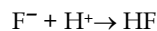
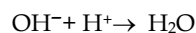
67. c)

68. b)  $PbS + 4H_2O_2 \rightarrow PbSO_4 + 4H_2O$ .

69. b)

70. b)  $NH_4Cl + NH_4OH$  is third group reagent. This group includes  $Fe^{3+}$ ,  $Al^{3+}$ ,  $Cr^{3+}$ . Radicals are precipitated as their hydroxides.

71. d)  $NH_2^- + H^+ \rightarrow NH_3$



Among,  $NH_3$ ,  $CH_4$ ,  $H_2O$ ,  $HF$ ,  $HF$  is the strongest acid so  $F^-$  is the weakest base.

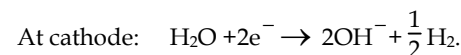
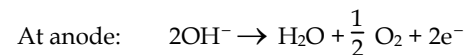
72. a)  $\bar{\nu} = R \left[ \frac{1}{(2)^2} - \frac{1}{(3)^2} \right] = \frac{5R}{36} \text{ cm}^{-1}$

73. c)  $l = 3$  means f-sub-shell. It has seven orbitals and hence can accommodate 14 electrons. In general the number of electrons in a sub-shell =  $4l + 2$ .

74. a) In  $BF_3$ , the three B - F bond dipoles cancel each other and resulting dipole moment is zero.

75. b) large cation, small anion

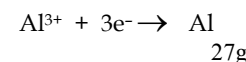
76. c)  $NaOH \rightarrow Na^+ + OH^-$



77. c)  $\pi 2p_x$  and  $\pi 2p_y$  MO's have equal energy.

78. b) O.N. of iron atoms outside the square brackets is + 3.

79. a) 54 g of Ag is deposited by electricity =  $\frac{69500}{2} \text{ C}$



Now,  $3 \times 69500 \text{ C}$  deposit  $Al = 27 \text{ g}$

$$\frac{69500}{2} \text{ C deposit } Al = \frac{27 \times 69500}{2 \times 3 \times 69500} \text{ g} = 4.5 \text{ g.}$$

$$40 = E_p - 20; \quad E_p = 60 \text{ kJ.}$$

80. a) Here, water is present in excess, so its conc. does not affect the rate of the reaction as the reaction progresses.

81. c)  $r_1 = k(a)^n$

$$r_2 = k(9a)^n$$

$$\frac{r_2}{r_1} = 3 = \frac{k(9a)^n}{k(a)^n}$$

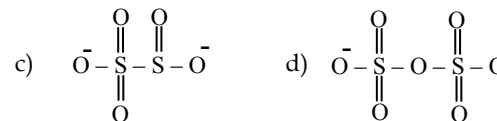
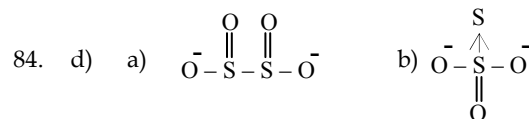
$$3 = (9)^n \text{ or } n = \frac{1}{2}.$$

82. d)  $PH_3$ ,  $P_2O_5$ ,  $H_2O$  illustrates law of reciprocal proportions.

83. a) No. of milli equivalents =  $100 \times 0.6 = 60$

$$\text{No. of milli moles} = \frac{60}{3} = 20$$

( $\therefore$  Eq. mass = Mol. Mass/3)



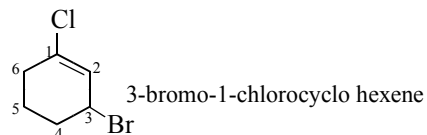
85. b)  $\frac{92.5 - P}{92.5} = \frac{1 \times 18}{1000}$

$$\text{or } 92.5 - P = \frac{92.5 \times 18 \times 1}{1000} = 1.665$$

or  $P = 92.5 - 1.665 = 90.8$  atm.

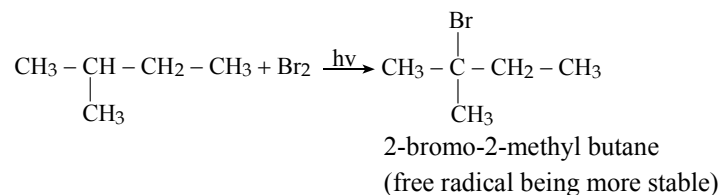
86. c) All aliphatic monocarboxylic can be represented as  $C_nH_{2n+1}COOH$  or  $C_nH_{2n}O_2$ .

87. c)



88. a) Acetylene being weaker acid than water, cannot form salt & water with NaOH.

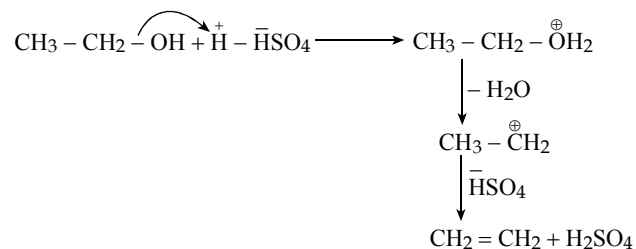
89. b)



90. d) Trans-pent-2-ene being more stable than cis-isomers so it is the major products.

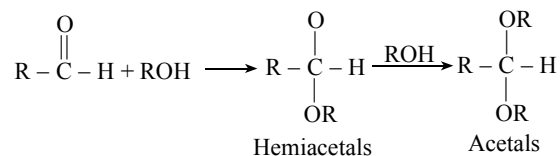
91. c) Red colour is due to the salt of nitrolic acid.

92. d)



93. b)  $C_6H_5 - OC_2H_5 + HI \longrightarrow C_6H_5OH + C_2H_5I$

94. c)



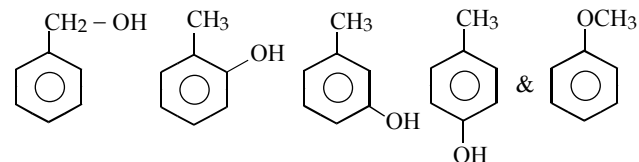
95. a)

96. b) Either alcohol or acid, reactivity towards esterification reaction is  $CH_3 > 1^\circ > 2^\circ > 3^\circ$ .

97. a)  $CH_3 - C \equiv N + 2[H] \longrightarrow CH_3 - CH = NH \xrightarrow{H_2O} CH_3CHO + NH_3$

(Stephan's reduction)

98. c)



99. c)  $\alpha$  &  $\beta$ -methyl glucosides are formed only in ring structure.

100. d) It is the condensation co-polymer of terephthalic acid and ethylene glycol.

### Botany

101. b) The reciprocal cross is cross between individuals of same genotype with reverses sex.

102. b) The photophosphorylation is the formation of ATP from ADP and iP in presence of light energy in grana region of chloroplast.

103. b) The maternal or cytoplasmic inheritance is due to non-nuclear DNA present in mitochondria and chloroplast.

104. c) The cellular totipotency is capability of cell giving whole organism. It is applied for all types of cells which follow cell theory (all eukaryotic cells having nucleus).

105. c) The test tube baby is the normal baby, who is obtained from fertilization of ovum with sperm on vessels and later embryo is transferred to woman womb.

106. c) The prokaryotic cells (bacteria, cyanobacteria, mycoplasm) have single (rarely up to 3) circular or linear (not both) naked DNA molecules.

107. b) The magnesium is the central core element surrounded by 4 nitrogen element in porphyrin ring (head) of chlorophyll pigments.

108. d) The carotenes pigments absorbs violet, indigo and blue light (cannot absorbs light beyond green light).

109. c) The spermatophytes bear seeds. The advance spermatophytes like Angiosperms also bear fruits. The typical spermatophytes includes gymnosperms like *Pinus*, *Cycas*, *Ginkgo*, *Papaver*, *Ephedra*. *Selaginella* and *Rhizopus* are fern and fungi respectively.

110. b) In parasitic food chain the pyramid of number is always inverted (since host in single).

111. d) Naked seed bearing plant is gymnosperm which produce endosperm prior to fertilization and remain haploid.

112. b) The movement of antherozoids due to chemical like mucilage or sugar is called chemotactic movement. It is common character of Bryophytes and Pteridophytes.

113. d) The *Escherichia coli* is pathogenic bacteria which is found in pollutate water.

114. b) The skin colour of human shows polygenic inheritance which is controlled by number of dose of genes.
115. d) Diabetes is genetic disorder but not related sex chromosomes. The colour blindness, myopia and haemophilia are X-linked traits.
116. d) The DPD (diffusion pressure deficit) is driving force of absorption and ascent of sap.
117. d) Phenyl mercuric acetate (PMA) is antri-transpirant which decreases the rate of transpiration.
118. a) The proteases acts on protein and help to breakdown into amino acids.
119. b) The increasing rate of O<sub>2</sub> in atmosphere activates the oxygenic properties of Rubisco and starts photorespiration which is also called Warburg effect.
120. c) The mitochondria and chloroplast are the organelles associated with energy conversion.
121. d) The obligate anaerobic organisms produce low energy in absence of oxygen. When oxygen is provided they will die due absent of respiration.
122. d) Imbibition is movement of solution or liquid from wetter region to drier region due to adhesive and cohesive force. It increases pressure, causes swelling and produce heat.
123. a) At compensation point, the rate of respiration and photosynthesis is equal and plant will not grow and die later.
124. c) The growth or movement of tendril is thigmotropism or haptotropism.
125. c) The  $\alpha$ -ketoglutaric acid undergo oxidative decarboxylation and release hydrogen (in the form of NADPH<sub>2</sub>) and carbon dioxide.

### Zoology

126. b) In weak electric field, many animals including *Amoeba* and *Paramecium* which are electropositive show **positive galvanotaxis** congregating or gathering towards anode. However, in the animal like *Hydra*, the proximal or pedal end is electropositive so it moves towards the anode (=negaive) and the distal or oral or tentacular end is electronegative hence it lies towards the cathode (=positive).
127. c) In *Balanoglossus*, there is no definite **endoskeleton** however there are four stiff structures of supporting nature - buccal diverticulum, proboscis skeleton, branchial skeleton, and pygochord. The **buccal diverticulum** is a hollow pre-oral outgrowth, extending from the roof of the buccal cavity into the proboscis. It was for a long time known as **notochord** or **stomochord** assuming that it represented anterior region of the notochord of Chordates. The buccal diverticulum extends forward in some Eteropneusts as a slender vermiform process or appendix. The buccal diverticulum is neither **analogous** nor **homologous** with the Chordate notochord, however histologically it is identical with the wall

- of the **buccal cavity**, and is apparently nothing more than a pre-oral extension of the gut.
128. d) Deficiency of vitamin B<sub>5</sub> causes **burning feet syndrome**; deficiency of vitamin B<sub>6</sub> causes **dermatitis** and **anaemia**; deficiency of Folic acid causes **megaloblastic anaemia**.
129. a) Three pairs (one pair of parotid, one pair of sub-maxillary/sub-mandibular, and one pair of sublingual) of salivary glands are found in man. Four pairs (one pair of parotid, one pair of sub-maxillary/sub-mandibular, one pair of sublingual, and one pair of infra-orbital) of salivary glands are found in rabbit. Five pairs (one pair of parotid, one pair of sub-maxillary/sub-mandibular, one pair of sublingual, one pair of infra-orbital, and one pair of molar) of salivary glands are found in cat. Six pairs of salivary glands are not found in any mammal.
130. c) One left and one right lobe is comprised in frog; two left and two right lobes are not found in any animal; two left and four right lobes are found in rabbit.
131. c) Lacuna - empty space filled up with fluid in which cells like chondrocytes and osteocytes are lodged. Islet - small island-like structure as seen in the pancreas and known as islets of Langerhans. Roulleaux formation - stack or pile-like that of coins in which RBCs tend to aggregate. Canaliculi - fine channel-like protoplasmic processes of the lacuna of osteocytes which tend to form Haversian system or osteon (longitudinal Havesian canals and transverse Volkman's canals) in mammalian long bone.
132. d) Hepatic vein consists of deoxygenated blood with almost highest amount of urea. Pulmonary vein contains oxygenated blood and almost same amount of urea as in hepatic vein. Hepatic portal vein contains deoxygenated blood loaded with simple food along with almost less amount of urea. Renal vein consists of least urea because it carries deoxygenated blood with almost no urea or least urea.
133. b) Retroperitoneal organ is that which is present in the posterior part of the coelomic cavity, i.e., in the abdominal coelom and covered by peritoneum. Peritoneum, also called mesothelium, is the coelomic epithelium of the body-wall and gut-wall (= alimentary canal). Endothelium is simple squamous epithelium forming capillary, lining innermost wall of blood vessels (=tunica interna) like artery and vein, and lining innermost wall of heart like atrium and ventricles and is not associated with coelomic epithelium. Kidney of man is covered by peritoneum, i.e., coelomic epithelium or mesothelium on its ventral side.
134. b) Salivary glands in man are three pairs. Collar bones in man are one pair. Cranial nerves in man are twelve pairs.
135. b) Brain of man is covered by three meninges (singular - meninx) - .piamater, arachnoid and duramater. **Piamater** is thin innermost vascular and pigmented sheath that lies in contact with brain. At two places, it is fused with roof of brain to form **choroid plexus** for secreting

- cerebrospinal fluid (CSF). The anterior one is called **anterior choroid plexus** and the posterior one is known as **posterior choroid plexus**.
136. b) **Thermoreceptors** which are sensitive to temperature changes are two types: **caloreceptors** that are sensitive to heat, e.g., **Ruffini's organs** or **corpuscles** and **frigidoreceptors** which are sensitive to cold, e.g., **end bulbs of Krause**. **Tangoreceptors** are tactile or touch receptors which come in contact with stimulus like **Meissner's corpuscles**, **Merckel's discs** or **corpuscles**, **free nerve endings**, **hairend organs** (=basket nerve endings).
137. d) Calcification of **pineal gland** in man occurs at the age of seven and is called **brain sand**. **Pituitary gland** is **master endocrine gland** and is also known as **conductor of endocrine symphony**. **Thyroid gland** is the largest endocrine gland. **Thymus gland** in man shows ageing effect because at birth, it is 10 to 12 g; at puberty, it is 20 to 30 g; and at old age, it is 3 to 6 g.
138. c) **Morphogenesis** - assumption of shape, size, and external features by embryo. **Organogenesis** - development of tissues and organs from three germ layers. **Embryogenesis** - development of new individual from fertilized egg or zygote.
139. a) On one side each testis of man is covered by hollow **tunica vaginalis**, a bilayer of peritoneum with a narrow coelomic cavity having coelomic fluid for sliding. Rest options are wrong.
140. c) Antibodies are protein molecules called immunoglobulins and abbreviated as Ig. Immunoglobulins are five types -IgM (found in blood), IgG (80%, pass through placenta), IgD (surface of B-cells to secrete other antibodies), IgE(allergy reactions), and IgA (GI tract, Res. tract, body surface, tears, saliva, clostrum, etc.).
141. b) Withdrawal symptoms which are unpleasant psychological and physiological symptoms that appear on sudden stoppage of drug by drug addict are: tears, saliva, and nasal discharge; excessive sweating; tremors, cramps, twitching, and convulsion; changed appetite; nausea and vomiting; yawning; drowsiness and fatigue; and insomnia or disrupted sleep.
142. c) Orientation is movement of animals without the involvement of any stimulus. Taxis are directional orientation or movement of an animal towards the source of stimulus or away from the source of stimulus. Reflexes are sudden and automatic movement of animals or the parts therein due to stimulus.
143. c) Intercerebral glands of cockroach in brain secrete brain hormone. Prothoracic gland after being stimulated by brain hormone secretes ecdysone. Corpora allata are neurosecretory and secrete neotinin also called juvenile hormone. Corpora cardiaca secretes metabolic hormones.

144. d) Ectonephricnephridia of common earthworm, *Metaphire* (=Pheretima) are integumentary, pharyngeal, and septalnephridia because all of them are ectodermal in origin.
145. d) Ordovician period - origin of fishes. Jurassic period - age of reptiles. Neogene period - age of man.
146. d) *Paramecium caudatum* is dimorphic because of the presence of two types of nuclei - macronucleus and micronucleus. It is heterokaryote due to the presence of two different types of nuclei - macronucleus and micronucleus. It is binucleate because it has two nuclei - macronucleus and micronucleus.
147. b) Benign malaria caused by *Plasmodium vivax*, *Plasmodium malariae*, and *Plasmodium ovale* is that in which most of the organs of the patient suffering from malaria are affected. Malignant malaria caused by *Plasmodium falciparum* is that in which all of the organs including brain of the patient suffering from malaria are affected
148. d) Among animals, conjugation only occurs in Protozoa, e.g., in *Plasmodium*. Syngamy which is a type of sexual reproduction in animals is two types: isogamy, e.g., *Monocystis* and anisogamy, e.g., *Plasmodium*.
149. d) Eversion is the bringing out of the part of the alimentary canal through mouth at the time of feeding. In *Dugesia*, the pharynx is brought out and is called proboscis. In *Metaphire*, buccal cavity is carried out. In *Asterias*, stomach is brought out.
150. c) Tidal volume (TV) - volume of air inspired or expired in relaxed or resting position. It is 500 ml (350 ml in alveoli of lungs and 150 ml in dead space). Residual volume (RV) - volume of air left in alveoli of lungs and dead space after forceful expiration. It is 1100 to 1200 ml and is useful in uninterrupted gaseous exchange. Vital capacity (VC) = TV + IRV + ERV (4100 to 4600 ml) or VC = TLC -RV. Total lung capacity (TLC) = VC + RV (5200 to 5800 ml).

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151.b	152.a	153.c	154.ba	155.d	156.c	157.b	158.d	159.d	160.c
161.c	162.a	163.b	164.c	165.c	166.c	167.d	168.d	169.b	170.d
171.a	172.b	173.d	174.d	175.d	176.c	177.b	178.a	179.a	180.b
181.d	182.d	183.b	184.d	185.d	186.d	187.d	188.c	189.a	190.a
191.b	192.c	193.b	194.a	195.d	196.c	197.b	198.a	199.d	200.a

Result will be published on Sunday

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==== Best of Luck ====