

OJEE BIOLOGY SOLUTION 2011

HELD ON 08.05.11

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QnNo.	Answer
1.	Organelles associated with photorespiration ____ (a) peroxisome (b) chloroplast (c) mitochondria (d) All Ans. All
2.	Fluid mosaic model was given by (a) Robertson (b) Schwann (c) Davedonson (d) Singer and Nicholson Ans. Singer and Nicholson
3.	Linnaeus give (a) Binomial nomenclature (b) Trinomial nomenclature (c) Zoological nomenclature (d) Botanical nomenclature. Ans. Binomial nomenclature
4.	Plasma membrane is made up of (a) Protein, lipid (b) Protein, lipid, carbohydrate (c) Protein (d) Lipid. Ans. Protein, lipid, carbohydrate.
5.	Enzyme responsible for reverse transcription is : (a) Reverse transcriptase (b) DNA polymerase (c) RNA polymerase (d) RNA dependent RNA polymerase. Ans. Reverse transcriptase
6.	PCR involve in (a) DNA amplication (b) cutting of DNA (c) Synthesis of RNA (d) Fermentation. Ans. DNA amplication
7.	Which of the following is the father of Botany ? (a) Theophrastus (b) Aristotle (c) Linnaeus (d) Pasture Ans. Theophrastus
8.	Actively moving organism in aquatic ecosystem (a) Benthos (b) Phytoplankton (c) Zoo plankton (d) Nekton. Ans. Nekton.
9.	Which of the following is responsible to rise water upto 10 mts of tall plants (a) root pressure (b) capillary action (c) transpiration pull (d) air pressure Ans transpiration pull
10.	Some feature of plant leaves are I. Hair on the lower surface II. Large surface area III. Waxy cuticle IV. Sunken stomata on upper epidermis. Which feature reduces water loss from leaves ? (a) I, II and IV (b) I and II (c) II and III (d) I and IV. Ans. I and II.
11.	Which of the following is usually not considered as mutagen (a) lower temperature (b) UV (c) formaldehyde (d) Nuclear rection. Ans lower temperature
12.	Colchicine arrest spindle at which phase (a) metaphase (b) Telophase (c) Prophase (d) Anaphase. Ans. Metaphase Reason. Colchicine don't allow microtubule assembly during metaphase.
13.	Vascular cryptogams is (a) Gymnosperms (b) Pteridophytes (c) Fungi (d) Bryophytes Ans. Pteridophytes Reason : It is non seeded vascular plants.
14.	Which is a protein for spindle fibre ? (a) Actin (b) Myosin (c) Actino myosin (d) Myoglobin Ans. Actin Reason : In some lower group of animals the spindle is made up of actin.

15.	In cauliflower the edible part is entire in Hoescence which is (a) Corymb (b) Corymbose (c) Umbel (d) Catkin. Ans. Corymbose.
16.	Find out odd one (a) Embryosac (b) Micropyle (c) Nucellulus (d) Pollen grain Ans. Pollen grain
17.	Which is the exception to cell theory ? (a) Fungi (b) Bacteria (c) Lichens (d) Virus. Ans. Virus Reason. As it is a cellular, non protoplasmic.
18.	Chromatid formation takes place at (a) S - phase (b) At starts of mitosis (c) At starts of meiosis (d) G ₂ . Ans. S – phase Reason. DNA replication occurred in S – phase.
19.	End of fragment molecule of DNA are sticky due to (a) Calcium ions (b) Endonuclease (c) Free methylation (d) Unpaired base Ans. Unpaired base
20.	Which of the following is not a cell inclusion ? (a) Crystal (b) Starch (c) Fat droplets (d) Vacuole Ans. Vacuole Reason: It is the dumping station of the cell.
21.	Tightly bound non proteinaceous organic compound is (a) cofactor (b) prosthetic group (c) Apoenzyme (d) Holoenzyme. Ans. prosthetic group Reason. It is firmly associated with protein part of the enzyme.
22.	Jute is mainly (a) secondary base fibre (b) wood fibre (c) surface fibre (d) none Ans. secondary base fibre Reason : Jute fibres are obtained from secondary phloem.
23.	Casparian strip is found in (a) endosperm (b) endodermis (c) pericycle (d) pith. Ans. endodermis. Reason: The inner and radial wall is highly thickened in the endodermis, called casparian strips, after it's discover caspary.
24.	Which of the following organic compound is produced by fermentation and is used to replace fossil petrol ? (a) Ethanol (b) Methanol (c) Ecolinic acid (d) Pilmelic acid. Ans. Ethanol.
25.	Red rot of sugarcane is caused by (a) Colletotrichum falcatum (b) Helminthosporium oryzae (c) Phytephthora infestance (d) Xanthomonas Ans. Colletotrichum falcatum Reson : It is a fungal disease.
26.	Ovule is attached to the placenta of ovary wall by: (a) Hilum (b) Raphae (c) Funicle (d) Testa. Ans. Funicle. Reason: It is the stack of the ovule.
27.	One turn of DNA has no's of base pairs. (a) 10 (b) 8 (c) 6 (d) 100. Ans. 10. Reason. One pitch of DNA contains 10 base pairs.
28.	Stele is composed of (a) pericycle, pith (b) Endodermis, pericyde, V.B. (c) Endodermis, pericycle, pith, V.B. (d) Pith, vascular bundle. Ans. Pith, vascular bundle
29.	Which of the following is benefit to epidermal layer ? (a) Cotton fibres (b) Jute fibres (c) Hemp fibres (d) Sun hemp. Ans. Cotton fibres Reason: It is the surface fibre.
30.	Multicostate parallel venation found is (a) Grass, Palm (b) Canna, Banna (c) Zizypus, Hibiscus. (d) Banyan, Grass. Ans. Grass, Palm
31.	Thalamus of hyposynous ovary is (a) Convex (b) concave (c) flat with partly cup shaped (d) none Ans. Convex. Ans. It is superior ovary.
32.	Organelle that is not a cell inclusion ? (a) Protein (b) Stigma (c) Fat droplets (d) Vacuole Ans. Vacuole
33.	120° phyllotaxy is found in (a) distichous (b) Tristichous (c) Pentastichous (d) Octastichous Ans. Tristichous Reason : Tristichous shows the lowest angle of divergence i.e. 120°.

34.	Entry of the pollen tube with two male gametes and tube nucleus through micropyle is (a) Mesogamy (b) Porogamy (c) Chalazogamy (d) Autogamy. Ans. Porogamy Reason: Entry of pollen tube through integument is called misogamy.
35.	Subaerial stem modification with long internode. (a) Stolon (b) Offset (c) Sucker (d) Runner. Ans. Runner.
36.	Cereals mostly are belongs to (a) Poaceae (b) Orchidaceae (c) convolvulaceae (d) malvaceae. Ans Poaceae
37.	Synaptenemal complex is found during (a) Zygotene (b) pachytene (c) Diplotene (d) Diakinesis. Ans. Zygotene. Reason: It is formed in zygotene.
38.	Change in single base pair always result in (a) Result in new species (b) may not change the phenotype (c) always change the polypeptide chain (d) always change the phenotype Ans. may not change the phenotype.
39.	Plasmids are (a) extra chromosomal DNA, which can self replicate (b) Carry genetic sequence, without expression (c) remains integrated with host DNA, without replicating ability (d) none. Ans. extra chromosomal DNA, which can self replicate Reason: Plasmids are extra chromosomal DNA in bacterial cell, which can code for synthesis of polypeptide.
40.	C_DNA is (a) formed by reversed transcription (b) cloned DNA (c) circular DNA (d) Re combinant DNA Ans. formed by reversed transcription Reason. Complementary DNA is synthesised from RNA by reverse transcriptase.
41.	56 cells are produced in meiosis in which (a) first division in reduction (b) second division is equational (c) first division is equational (d) second division is reductional. Ans. first division in reduction
42.	Central dogma of protein synthesis is (a) DNA → RNA → Protein (b) DNA ⇌ RNA → Protein (c) DNA ⇌ RNA → Protein (d) DNA → protein → RNA Ans. DNA → RNA → Protein Reason : . DNA → RNA → Protein, shows reverse flow of transcription in retrovirus, after the
43.	Cyclic photophosphorylation is (a) link to PS I (b) link to PS II (c) Expulsion of electron from P ₇₀₀ (d) Release of electron from P ₆₈₀ Ans. link to PS I Reason. Only ATP synthesis takes place in cyclic photophosphorylation.
44.	Iodine is found in (a) Polysiphoria (b) Laminaria (c) Spirogyra (d) Diatom Ans. Laminaria Reason : Laminaria (Brown algae) is the source of iodine.
45.	Some gene in bacteria and virus may code for more than one polypeptide is called as (a) split gene (b) jumping gene (c) overlapping genes (d) Pseudogenes Ans. overlapping genes
46.	Which of the following statements is not correct with respect to plasmids ? (a) It is the extra chromosomal DNA in bacteria (b) It is not a integral part but inert genetic material (c) Host chromosome can be integrated with the plasmid (d) Transfer of plasmid can be done from cell to cell without killing the host. Ans. It is not a integral part but inert genetic material.
47.	TCA enzyme is found in (a) cytoplasm (b) mitochondiral matrix (c) inner membrane of mitochondria (d) none Ans. (b) mitochondiral matrix
48.	Seed habit is due to (a) Heterospory (b) Apogamy (c) Apospory (d) All of these. Ans. Heterospory.
49.	Hydrophytes are characterized by (a) Increase in aerenchyma (b) Leaf with large surface area (c) well developed vascular tissue (d) well developed mechanical tissue. Ans. Increase in aerenchyma
50.	Introduction of foreign gene into an organism for its better trait is (a) Genetic engineering (b) Gene

	therapy (c) Biotechnology (d) None. Ans. Genetic engineering.
51.	Root cap is not help is water absorption due to (a) Absence of Root hairs. (b) Pressure of Root hair (c) It is seen is elongation zone (d) None. Ans. Absence of Root hairs.
52.	Old dicot root differ from old dicot stem due to (a) Absence of sec. xylem (b) Possessing metaxylem (c) Possessing Protoxylem (d) Absence of sec. Phloem Ans Possessing Protoxylem.
53.	d.s. RNA found in (a) Reovirus (b) Retrovirus (c) Influenza virus (d) TMP. Ans Reovirus. Reason: It Retrovirus genetic material is S.S. diploid RNA.
54.	Moss spore germinate to form (a) Protonema (b) Leafy gametophyte (c) leafy sporophyte (d) prothallus Ans. Protonema Reason : It is haploid.
55.	Stomata open is due to accumulation of (a) K ⁺ (b) Na ⁺ (c) P (d) Mg. Ans K ⁺ Reason. K ⁺ influx induces stomatal opening.
56.	Floridian starch is found in (a) Rhodophyceae (b) Chlorophyceae (c) Phaeophyceae (d) Cyanophyceae Ans. Rhodophyceae Reason : It is the reserve material.
57.	Root pressure is due to (a) active transport (b) passive transport (c) more transpiration (d) No guttation. Ans. active transport Reason. Root pressure is the pressure exerted on the xylary elements due to the activity of root.
58.	One strand of DNA has the following sequence of nucleotide 3' ATTCGCTAT 5' so the other strand of DNA has (a) 5' TAAGCGATA 3' (b) 3' TAAGCGATA 5' (c) 5' GACGCGATA 3' (d) 3' GACGCGATA 5'. Ans. 5' TAAGCGATA 3'
59.	Middle lamellae is made up of (a) Calcium pectate (b) Chlorine pectate (c) Manganeg pectate (d) sulphur pectate (d) Sulphur pectate. Ans. Calcium pectate
60.	Aggregate fruit is formed from (a) Multicarpous apocarpous pistil (b) multicarpous, syncarpous Pistil (c) Unilocular apocarpous pistil (d) Multicarpous syncarpous pistil Ans. Multicarpous apocarpous pistil
61.	Systema naturaed is written by (a) Carlous Linnaeus (b) Darwin (c) John Ray (d) Aristotle Ans. Carolus Linnaeus Reason: Carolus Linnaeus is regarded as father of classification.
62.	Recapitulation theory was given by (a) Haeckel (b) Darwin (c) Lamarck (d) Ras. Ans. Haeckel
63.	Energy flow in ecosystem is ____ (a) Unidirectional (b) Multidirectional (c) Bidirectional (d) None. Ans. Unidirectional
64.	Acid rain is caused due to (a) SO ₂ , NO ₂ (b) CO, CO ₂ (c) O ₃ , O ₂ (d) CO ₂ , NH ₃ . Ans. SO ₂ , NO ₂ Reason. SO ₂ and NO ₂ forms H ₂ SO ₄ , HNO ₃ .respectively.
65.	Ostia present in (a) Porifera (b) Coelenterate (c) Annelida (d) Mollusca. Ans. Porifera. Reason: There are no of minute pores present in the body of porifera called ostia, through which water enters into the body.
66.	Canal system present in (a) Porifera (b) Coelenterata (c) Annelida (d) Arthropoda Ans. Porifera
67.	Pertaradial symmetry seen in (a) Annelida (b) Echinodermata (c) Artimopoda (d) Porifera Ans. Echinodermata Reason : Starfish shows pentaradial symmetry.
68.	Open circulatory system found in (a) Cockroach (b) Snail (c) Earthworm (d) Both cockroach and snail Ans. Both cockroach and snail Reason : Open circulation found in cockroach and snail, where blood passes through the open spaces.

69.	The nomenclature given by Linnaeus is (a) Binomial (b) Multinomial (c) uninomial (d) Trinomial. Ans. Binomial. Reason: Binomial nomenclature was given by Carolus Linnaeus.
70.	Locomotory organ of Annelida is (a) Setae (b) Parapodia (c) Sacken (d) All of these Ans. All of these Reason : Sucken = Leech, Parapodia = Neries, Setae = Earthworm
71.	Haemocoel found in ____ (a) Cockroach and pila (b) Hydra (c) Aurelia (d) Earthworm. Ans. Cockroach and pila
72.	Filariasis is caused by (a) <i>Wuchereria</i> (b) Entamoeba (c) <i>Ascaris</i> (d) <i>Fasciola</i> Ans. <i>Wuchereria</i> Reason: It is an aschihelminths.
73.	Filariasis is called elephantiasis because (a) body part swollen (b) caused by elephant (c) caused by <i>Ascaris</i> (d) caused by <i>Entamoeba</i> . Ans. body part swollen. Reason: In filariasis / Elephantiasis the affected part is swollen due to unequal protein accumulation.
74.	Exclusive Holozoic nutrition seen in (a) man (b) Amoeba (c) Shark (d) Reptile. Ans. Man Reason. Man has exclusively holozoic nutrition.
75.	Amoebiasis in (a) mild diarrhoea with alternate constipation (b) Stool with mucus (c) Stool with blood (d) All of these Ans. All of these Reason : It is caused by <i>Entamoeba histolytica</i> .
76.	Mendel not get linkage due to (a) Independent assortment (b) Law of dominance (c) Law of unit character (d) None Ans. Independent assortment Reason: Mendel does not get linkage due to independent assortment.
77.	Most abundant and form most of the body parts (a) Epithelial (b) Muscular (c) Connective (d) nervous Ans. Connective Reason : Most abundant and form most of the body parts is connective tissue.
78.	Site of Fertilization is (a) Fallopian tube (b) Ovary (c) Testis (d) Vagina. Ans. Fallopian tube Reason. Site of fertilization is ampulla of Fallopian tube.
79.	Stomochord found in _____. (a) Urochordata (b) Hemichordata (c) Cephalochordata (d) Both (a) and (b). Ans. Hemichordata. Reason: In case of Hemichordata stomochord is found.
80.	Notochord persists throughout the life in (a) Amphioxus (b) Fish (c) Amphibia (d) Leech. Ans. Amphioxus Reason. Amphioxus belongs to cephalochordata.
81.	Biological oxidation in Krebs's cycle requires (a) CO ₂ (b) O ₂ (c) N ₂ (d) SO ₂ Ans. O ₂ Reason: ETS cycle required O ₂
82.	Inner lining of kidney has (a) Nephrocyte (b) Podocyte (c) Choanocyte (d) Amoebocyte Ans. Podocyte Reason : Podocyte present in the inner lining of Nephron.
83.	Most abundant immunoglobulin is (a) I _g G (b) I _g M (c) I _g A (d) I _g E. Ans. I _g G. Reason: I _g G is most abundant immunoglobulin.
84.	Macrophages are (a) Phagocytes (b) Bone formation (c) Nerve impulse (d) ageing. Ans. Phagocytes
85.	Non keratinised stratified squamous epithelium present in (a) Epidermis of skin of hand and vertebrate (b) Vagina and cervix (c) Oral cavity (d) Both vagina, cervix and oral cavity. Ans. Both vagina, cervix and oral cavity Reason : Vagina and oral cavity contains non keratinised epithelium.
86.	Junctions of Axon to Dendron is (a) Synapse (b) Synapsis (c) synaptic cleft (d) None. Ans. Synapse Reason. Here synaptic transmission occurs.
87.	Sertoli cell found in ____ (a) Seminiferous tubule (b) Ovary (c) Leydig cell (d) All Ans. Seminiferous tubule Reason: They provide nourishment for developing sperm.

88.	Bowman's capsule found in (a) Cortex (b) Medulla (c) Convoluted tubule (d) Loop of Henle Ans. Cortex. Reason: Mainly Bowman's capsule found in cortex region of kidney.
89.	Anerobic respiration is (a) Fermentation (b) Fragmentation (c) Oxidation (d) Reduction. Ans. Fermentation. Reason. Fermentation is a process of anerobic respiration.
90.	What is absent in vertebrate ? (a) Cnidoblast (b) Claw (c) Epidermal scale (d) Tail. Ans. Cnidoblast Reason: Cnidoblast present in coelenterate.
91.	Increase in B.P. is due to ____ (a) Hypertension (b) Hypotension (c) Hyperglycemia (d) Hypoglycemia. Ans. Hypertension
92.	Oxyntic cell produce (a) HCl (b) Mucus (c) Pepsin (d) Trypsin Ans. HCl Reason : Oxyntic cell not secrete any enzyme.
93.	Large volume of air a person can be expired after forceful inspiration (a) IRV (b) ERV (c) vc (d) TV Ans. Vital Capacity Reason: This include ERV, TV and IRV
94.	What is the term used for accumulation of the nondegradable pollutant in higher trophic level. (a) biomagnification (b) biofestification (c) Eutrophication (d) Leaching Ans. biomagnification Reason : It is due to biomagnification
95.	Asthma is due to (a) Spasm in Bronchial muscle (b) Alveolar wall degradation (c) Pain in lungs (d) Damage in diaphragm. Ans. Spasm in Bronchial muscle. Ans. It is due to spasm in Bronchial muscle.
96.	Cigarette smoking causes (a) Lung cancer (b) Baldness (c) Colorblindness (d) None. Ans. Lung cancer.
97.	Colorblindness seen in (a) Recessive female chromosome (b) Recessive male chromosome (c) Dominant male chromosome (d) Dominant female chromosome. Ans. male chromosome. Reason: $x^c y$ = colourblindness.
98.	Scientific name of Rohu is (a) <i>Labeo rohita</i> (b) <i>Catla catla</i> (c) <i>Naja naja</i> (d) <i>Anabas testidenius</i> Ans. <i>Labeo rohita</i> Reason : <i>Labeo rohita</i> is the scientific name of rohu.
99.	Cardiac muscle is found in (a) Myocardicom (b) Epicardicom (c) Endocardium (d) All. Ans. Myocardicom
100.	Ultimate source of energy in Biosphere is _____. (a) Blood (b) Sunlight (c) Food (d) Plants. Ans. Sunlight.
101.	Haemophilia is related with which of the following ? (a) cataract (b) polio (c) colour blindness (d) small pox. Ans. colour blindness Reason. Both are x linked recessive.
102.	Increase in B.P. is due to ____ (a) Hypertension (b) Hypotension (c) Hyperglycemia (d) Hypoglycemia. Ans. Hypertension
103.	Ornithology is ____ (a) Study of birds (b) Study of insects (c) Study of snakes (d) Study of fishes. Ans Study of birds. Reason: Study of bird is called ornithology.
104.	Test cross of dihybrid ratio 1 : 1 : 1 : 1 then it proves (a) F ₁ hybrid produces four different progeny (b) F ₁ hybrid is homozygous (c) Four different progeny is produced by P ₁ parents (d) None. Ans F ₁ hybrid produces four different progeny.
105.	Minamata occurs in (a) Japan (b) India (c) Russia (d) America (a) Japan., Reason: It occurs due to biomagnification of mercury

106.	Histamine is secreted by which cell (a) Neutrophil (b) RBC (c) Eosinophils (d) Basophils. Ans. Basophils Reason : Basophils secrete Histamine. Most cells of a type of basophil secrete histamine, serotonin and heparin.
107.	Which of the following is primary consumer ? (a) Producer (b) Carnivore (c) Topcarnivore (d) Herbivore. Ans. Herbivore
108.	Kaziranga is famous for (a) Rhinoceros (b) Tiger (c) Elephant (d) none Ans. Rhinoceros Reason : Rhinoceros unicornis = Kaziranga.
109.	Special feature of Bile juice (a) No enzyme (b) presence of amylase (c) Contains lipase (d) Contain H ₂ O. Ans No enzyme.
110.	Chipko movement (a) Salim Ali (b) Rajiv Gandhi (c) Indira Gandhi (d) Bahuguna Ans. Bahuguna Reason : Sunderlal Bahuguna started chipko movement which resisted deforestation.
111.	F ₁ has all tall, F ₂ ratio is 3 : 1, what does it prove ____ (a) Law of dominance (b) Law of segregation (c) Law of independent assortment (d) Incomplete dominance Ans. Law of segregation Reason. Law of segregation deals with monohybrid cross where the phenotypic ratio is 3 : 1.
112.	5 th June is (a) World's Environment day (b) World's Earth day (c) World's Food day (d) World's Health day Ans. World's Environment day
113.	Multiple phenotype is seen in (a) Polygenic inheritance (b) Epistasis (c) Monohybrid cross (d) Dihybrid cross. Ans. Polygenic inheritance. Reason: ABO blood group and polygenic inheritance shows multiple phenotype.
114.	Looping & somersaulting type of locomotion seen in (a) <i>Hydra</i> (b) Leech (c) Amoeba (d) Snail. Ans <i>Hydra</i> Reason: <i>Hydra</i> shows looping and somersaulting type of locomotion.
115.	Family is placed between (a) order & Genus (b) Genus & species (c) class & order (d) Phylum & class. Ans. order & Genus Reason. Family is after order & before Genus.
116.	Where is the Ball & socket joint found ? (a) Shoulder (b) Atlas and Axis (c) Atlas & Head (d) Knee. Ans. Shoulder. Reason: Shoulder and hip joints are Ball & socket joint.
117.	Evolution indicates (a) Rapid mutation – Neolamarckism (b) Survival of the fittest – Wallace (c) Ancon sheep – Neo Darwinism (d) Replicating plating – Lederberg. Ans. Replicating plating – Lederberg. Reason: Lederberg performed replicating experiment.
118.	WBC is a true cell because (a) Presence of nucleus (b) Phagocytosis (c) Polymorphism (d) None of these Ans. presence of nucleus Reason : Eukaryotic cells are true cells with nucleus.
119.	Theory of natural selection was given by (a) Darwin (b) Lamarck (c) John Ray (d) Linnaeus Ans. Darwin Reason : Theory of natural selection was proposed by C. Darwin
120.	Ptyaline is present in (a) salivary amylase (b) pancreatic amylase (c) Bile (d) None. Ans. salivary amylase Ans. Saliva contains ptyaline which digests starch.