

# Sharath Gore

## Biology mock test 4 2022-23

Time : 60 Min

Bio : Full Portion Paper

Marks : 400

**101)** Which of the is sprayed on all the pasted specimen of a herbarium to check the growth of fungus is

- A) NaCl
- B)  $\text{HgCl}_2$
- C)  $\text{Ca}(\text{OH})_2$
- D)  $\text{H}_2\text{SO}_4$

**102)** \_\_\_\_ is the free-living, anaerobic nitrogen-fixer.

- A) Beijerinckia
- B) Rhodospirillum
- C) Azotobacter
- D) Rhizobium

**103)** How many different types of genetically different gametes will produced by a heterozygous plant having the genotype AABbCc? (1998)

- A) Six
- B) Nine
- C) Two
- D) Four

**104)** Which one of the following events is thought to be most closely related to the sliding process between the two types of filaments which bring about contraction of the fibril?

- A) Binding of calcium ions
- B) Splitting of an ATP myosin complex
- C) The influx of sodium ions through the sarcolemma
- D) The liberation of acetyl choline at the motor end plates

**105)** Statement 1: Gap junctions work as cementing functions to keep the neighbouring cells together.

Statement 2: Tight junctions facilitate the cells to communicate with each other by connecting the cytoplasm of adjoining cells, for rapid transfer of ions, small and big molecules, etc.

- A) Both statement 1 and statement 2 are true and reason is the correct explanation of statement 1.
- B) Both statement 1 and statement 2 are true but reason is not the correct explanation of statement 1.
- C) Statement 1 is true but statement 2 is false.
- D) Both statement 1 and statement 2 are false.

**106)** Photoperiodism was first characterized in which of the following plants?

- A) Potato
- B) Tobacco
- C) Cotton
- D) Tomato

**107)** The Bt toxin is not toxic to human beings due to

- A) the Bt toxin recognises only insect- specific targets
- B) the pro Bt toxin activation requires temperature above human body temperature
- C) the Bt toxin formation from pre Bt toxin requires pH lower than that present in human stomach
- D) conversion of pro Bt toxin to Bt toxin takes place only in highly alkaline conditions.

**108)** Kingdom protista includes

- A) Amoeba, Euglena, Escherichia
- B) Amoeba, Euglena, Chlamydomonas
- C) Amoeba, Euglena, Pseudomonas
- D) Amoeba, Euglena, Penicillium

**109)** Golgi bodies are absent in

- A) Bacteria
- B) Plants
- C) Animals
- D) Eukaryotic cells

**110)** Crossing over takes place at a stage between

- A) Pachytene and diplotene
- B) Leptotene and diplotene
- C) Zygotene and pachytene
- D) Zygotene and diplotene

**111)** Statement 1: BOD of a river pollution by sewage is more than 20 ppm.

Statement 2: Polluted river shows presence of excess of organic matter.

- A) Both statement 1 and statement 2 are true and statement 2 is the correct explanation of statement 1
- B) Both statement 1 and statement 2 are true but statement 2 is not the correct explanation of statement 1
- C) Assertion is true but statement 2 is false
- D) Both statement 1 and statement 2 are false

**112)** The process by which DNA of nucleus passes genetic information to mRNA

- A) Transportation
- B) Translation
- C) Transcription
- D) Translocation

**113)** Which of the following is the by-product of photosynthesis?

- A) Energy
- B) Oxygen
- C) Carbon dioxide
- D) Potential energy

**114)** Mark the incorrect condition regarding dicot

root.

- A) Inconspicuous pith
- B) Polyarch condition
- C) Presence of conjunctive parenchyma
- D) 2 to 4 xylem and phloem patches

**115)** Donors and recipients in a blood transfusion process can be

- A) Only brother and sister
- B) Only father and son
- C) Only maternal uncle and niece
- D) All the above

**116)** What is the other term for heart attack?

- A) Coronary thrombosis
- B) Myocardial infarction
- C) Cardiac arrest
- D) Ischaemia

**117)** Colour blindness is because of defect in

- A) cones
- B) rods and cones
- C) rods
- D) rhodopsin

**118)** The total energy fixed by a gram plant (*Cicer arietinum*) in an ecosystem on the whole is called

- A) Secondary production
- B) Gross production
- C) Primary production
- D) None of the above

**119) Statement 1:** A potted plant placed in a window shows bending of stem towards light.

**Statement 2:** This is an example of Teleology.

- A) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1
- B) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1
- C) The Statement 1 is true but the Statement 2 is false
- D) The Statement 1 is false but the Statement 2 is true

**120)** Vernalisation stimulates flowering in \_\_\_\_\_ plant.

- A) ginger
- B) turmeric
- C) carrot
- D) zamikand

**121)** Nissl's granules are characteristically found in

- A) Neurons
- B) Nephrons
- C) Cytons
- D) Dendrites

**122)** The scientific name of banyan is written as *Ficus benghalensis* L. identify the correct statements regarding this.

- A) The name should be written reverse with

*benghalensis* preceding *Ficus*

- B) Letter L. signifies Latin language
- C) Letter L. signifies the taxonomist Linnaeus
- D) *benghalensis* is a generic name

**123)** The cells lining the blood vessels belong to the category of (Mains 2011, 2010)

- A) smooth muscle tissue
- B) squamous epithelium
- C) columnar epithelium
- D) connective tissue

**124)** The pyruvic acid formed during glycolysis is oxidized to  $\text{CO}_2$  and  $\text{H}_2\text{O}$  in a cycle known as

- A) nitrogen cycle
- B) Calvin cycle
- C) Hill reaction
- D) Krebs' cycle

**125)** Statement 1 : Dikaryophase occurs before plasmogamy and karyogamy.

Statement 2 : Dikaryons contains two nuclei.

- A) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- B) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- C) The statement 1 is true but the statement 2 is false
- D) The statement 1 is false but statement 2 is true

**126)** Which part of the body is known as police guard?

- A) tonsil
- B) skin
- C) liver
- D) leucocytes

**127)** Mitral valve in mammals guards the opening between

- A) Pulmonary vein and left auricle
- B) Stomach and intestine
- C) Right auricle and right ventricle
- D) Left auricle and left ventricle

**128)** \_\_\_\_\_ hormone is not involved in tyrosine metabolism.

- A) Calcitonin
- B) Melanin
- C) Epinephrine
- D) Thyroxine

**129)** De Vries gave his mutation theory on organic evolution while working on (2005)

- A) *Pisum sativum*
- B) *Drosophila melanogaster*
- C) *Oenothera lamarckiana*
- D) *Althea rosea*

**130) Statement 1:** Morphine is a derivative of opium.

**Statement 2:** Smack is more powerful analgesic than morphine.

- A) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1  
 B) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1  
 C) This Statement 1 is true, but the Statement 2 is false  
 D) Both Statement 1 and Statement 2 are false

**131)** Statement 1 : Enzymes have active sites and substrates reactive sites, on their surfaces respectively.

Statement 2 : Active and reactive sites push the enzyme and substrate molecules away from each other :

- A) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1  
 B) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1  
 C) Both the statement 1 and statement 2 are false  
 D) The statement 1 is true but the statement 2 is false

**132)** What is the number of phenotypes possible from  $AaBbCc \times AaBbCc$  ?

- A) 27  
 B) 8  
 C) 9  
 D) 16

**133)** What is the intensity of sound in normal conversation?

- A) 10-20 dB  
 B) 40-60 dB  
 C) 120-150 dB  
 D) 90-120 dB

**134)** Match the following pairs correctly and choose the right combination

Column-I	Column-II
A. <i>Escherichia coli</i>	1. Nif gene
B. <i>Rhizobium meliloti</i>	2. Digestive hydrocarbon of crude oil
C. <i>Bacillus thuringiensis</i>	3. Production of human insulin
D. <i>Pseudomonas putida</i>	4. Biological control of fungal disease
	5. Bio-decomposed insecticide

- A) A = 3, B = 1, C = 5, D = 2  
 B) A = 2, B = 1, C = 3, D = 4  
 C) A = 1, B = 2, C = 3, D = 4  
 D) A = 3, B = 1, C = 5, D = 4

**135)** In \_\_\_\_\_ interaction both partners are adversely affected.

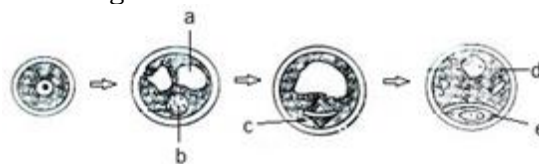
- A) mutualism  
 B) parasitism  
 C) competition  
 D) predation

**136)** An aggregate fruit is one which develops from (2014)

- A) multicarpellary syncarpous gynoecium  
 B) multicarpellary apocarpous gynoecium

- C) complete inflorescence  
 D) multicarpellary superior ovary

**137)** Identify the figure and out the correct matching.



- A) a-nucleus, b-vacuoles, c-symmetric spindle, d-generative cell, e-vegetative cell  
 B) b-nucleus, a-vacuoles, c-asymmetric spindle, e-generative cell, d-vegetative cell  
 C) b-nucleus, a-vacuoles, c-asymmetric spindle, d-generative cell, e-vegetative cell  
 D) a-nucleus, b-vacuoles, c-symmetric spindle, e-generative cell, d-vegetative cell

**138)** Statement 1 : In sigmoid growth curve, population finally stabilizes itself.

Statement 2 : Finally, the death rate increases than the birth rate.

- A) If both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1  
 B) If both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1  
 C) If the statement 1 is true but the statement 2 is false  
 D) If both the statement 1 and statement 2 are false

**139)** The chemiosmotic coupling hypothesis of oxidative phosphorylation proposes that adenosine triphosphate (ATP) is formed as

- A) a proton gradient forms across the inner membrane  
 B) there is change in the permeability of the inner mitochondrial membrane towards adenosine diphosphate (ADP)  
 C) ADP is pumped out of the matrix into the intermembrane space.  
 D) high energy bonds are formed in mitochondrial proteins

**140)** The shorter and longer arms of a submetacentric chromosome are referred to as (NEET 2019)

- A) m-arm and n-arm respectively  
 B) s-arm and l-arm respectively  
 C) p-arm and q-arm respectively  
 D) q-arm and p-arm respectively.

**141) Statement 1:** Transformation was discovered by Griffith in 1928.

**Statement 2:** Transformation is the absorption of DNA segment by a living bacteria.

- A) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1  
 B) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the

Statement 1

- C) The Statement 1 is true, but the Statement 2 is false  
D) The Statement 1 is false but the Statement 2 is true

**142)** Stem takes part in storage and perennation in

- A) Groundnut  
B) Wheat  
C) Radish  
D) Ginger

**143)** \_\_\_\_\_ hormone level reaches peak during luteal phase of menstrual cycle.

- A) Estrogen  
B) Progesterone  
C) Follicle stimulating hormone  
D) Luteinising hormone

**144)** Give the correct match in the following

	Column I		Column II
A	Flame Cells	p	Sponges
B	Collar Cells	q	Hydra
C	Stinging Cells	r	Planaria
-	-	s	Ascaris

- A) A=r, B=q, C=s  
B) A=r, B=s, C=p

C) A=r, B=p, C=s

D) A=r, B=p, C=q

**145)** Vascular bundles in which phloem is found on both sides of xylem are called

- A) Radial  
B) Bi collateral  
C) Collateral  
D) Amphicribal

**146)** Name the plant having reticulate venation

- A) Canna  
B) Mangifera  
C) Oryza  
D) Musa

**147)** Statement 1 : In gymnosperms, plants show well-developed vessels and fibres.

Statement 2 : Companion cells are absent in gymnosperm.

- A) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1  
B) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1  
C) The statement 1 is false but statement 2 is true  
D) The statement 1 is true but the statement 2 is false

**148)** Which one is characteristic for birds?

- A) They are warm blooded

B) They are flying animals

C) They are Bipedal and have feathers

D) They are quadruped and have scales

**149)** Plants manufacturing their own food are called

- A) Autotrophs  
B) Saprophytes  
C) Parasites  
D) Epiphytes

**150)** 'Bundle of His' is a part of \_\_\_\_\_ organs in humans.

- A) brain  
B) heart  
C) kidney  
D) pancreas

**151)** Lichen with branched system but small base is

- A) Foliose  
B) Fruticose  
C) Crustose  
D) Symbiont

**152)** Beta ( $\beta$ ) diversity is

- A) diversity within a population  
B) diversity between communities  
C) diversity within a community  
D) diversity between two ecozones

**153)** Cellulose are polymers of

- A) Polysaccharides of glucose  
B) Disaccharides of glucose  
C) Disaccharides of microfibrils  
D) Polysaccharides of microfibrils

**154)** Resistance to yellow mosaic virus in *Abelmoschus esculentus* was transferred from a wild species and resulted in a new variety known as

- A) *Musa pudica*  
B) *Raphanus sativus*  
C) Parbhani Kranti  
D) Sehore

**155)** Blastopore is (1992)

- A) opening of neural tube  
B) opening of gastrocoel  
C) future anterior end of embryo  
D) found in blastula

**156)** Trypsin is a digestive enzyme which occurs in mammals and digests

- A) Protein in stomach in an acidic medium  
B) Starch in buccal cavity in an alkaline medium  
C) Protein in duodenum in an acidic medium  
D) Protein in duodenum in an alkaline medium

**157)** ADH deficiency shows which of the following condition?

- A) Polyuria  
B) Polydipsia only  
C) Polydipsia and polyuria

D) Glucosuria

**158)** \_\_\_\_\_ is a driving force for the process of passive absorption of water in roots.

- A) Root pressure
- B) The increase in imbibitional pressure in roots cells
- C) Activity of aquaporins
- D) Transpiration in leaves

**159)** DDT residues are rapidly passed through food chain causing biomagnification as

- A) DDT is non-toxic to aquatic animals
- B) DDT is moderately toxic
- C) DDT is water soluble
- D) DDT is lipo soluble

**160)** Match the names of glands listed under column-I with the location given under column-II, choose the answer which gives correct combination of the alphabets of the two columns

Column - I (glands)	Column - II (location)
A) Crypts of Lieberkuhn	p Loop of duodenum
B) Pancreas	q Stomach
C) Adrenal gland	r Intestine
D) Gastric gland	s Kidney

- A) A = r, B = p, C = q, D = s
- B) A = r, B = p, C = s, D = q
- C) A = p, B = r, C = s, D = q
- D) A = q, B = s, C = r, D = p

**161)** Which enzyme is used for the purpose of joining a novel gene with host DNA?

- A) Helicase
- B) Endonuclease
- C) Ligase
- D) Polymerase

**162)** Membrane protein

- A) Works as recipient for informal molecules
- B) Works as recipient for transportation
- C) Helps in cell recognition
- D) Does all the above works

**163)** Gymnosperms are called naked seed plants because these lack

- A) Endosperm
- B) Cotyledon
- C) Ovary wall
- D) Testa

**164)** In cells of \_\_\_\_\_, spliceosomes are not found.

- A) fungi
- B) animals
- C) plants
- D) bacteria

**165)** In plants that shed pollen grain at two-celled condition, the generative cell divides and form the male gamet in the process of the

- A) entry of pollen tube in the synergid
- B) entry of pollen tube in the ovule
- C) growth of pollen tube in the stigma

D) growth of pollen tube in the style

**166)** Attractive forces of cell walls for water molecules is termed as

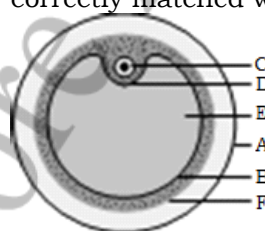
- A) Adhesion
- B) Cohesion
- C) Plasmolysis
- D) Osmosis

**167) Statement 1:** E. Coli is a parasitic bacteria found in human intestine.

**Statement 2:** Rhizobium is a symbiotic bacteria found in root nodules of various leguminous plants.

- A) Both Statement 1 and Statement 2 are true but Statement 2 is not the correct explanation of Statement 1
- B) Both Statement 1 and Statement 2 are true and the Statement 2 is correct explanation of the Statement 1
- C) Both Statement 1 and Statement 2 are false
- D) The Statement 1 is false but the Statement 2 is true

**168)** In the diagram of section of Graafian follicle, different parts are indicated by alphabets; choose the answer in which these alphabets have been correctly matched with the parts they indicate.....



- A) A = Membrana granulosa
- B = Theca externa
- C = Ovum
- D = Cumulus oophorus
- E = Antrum
- F = Theca interna
- B) A = Theca externa
- B = Theca interna
- C = Ovum
- D = Cumulus oophorus
- E = Antrum
- F = Membrana granulosa
- C) A = Membrana granulosa
- B = Theca interna
- C = Ovum
- D = Cumulus oophorus
- E = Antrum
- F = Theca externa
- D) A = Theca externa
- B = Theca interna
- C = Ovum
- D = Membrana granulosa
- E = Antrum
- F = Cumulus oophorus

**169)** A few plants exhibit unusual flowering phenomenon, \_\_\_\_\_ of them flower only once in their life time, generally after 50-100 years and produce large number of fruits.

- A) *Strobilanthes kunthiana*
- B) Bamboo
- C) *Cymbopogon reptans*
- D) *Calistemon linearis*

**170)** \_\_\_\_\_ is not the function of insulin.

- A) Initiates the formation of hepatic glycogen from excess of glucose.
- B) Increases the oxidation of glucose in the cells
- C) Initiates the conversion of glycogen to glucose
- D) Increases the permeability of cell membrane to glucose

**171)** Purkinje cells are related with which of the following part?

- A) Cerebrum
- B) Cerebellum
- C) Heart
- D) both (a) and (b)

**172)** Annelida and mollusca resemble in many embryonic features because both have

- A) Identical conspicuous segmentation in body, muscles and nervous system
- B) Spiral cleavage and mesoderm formation
- C) Meroblastic cleavage and ectoderm formation
- D) Special types of mouth parts

**173)** Re-absorption of glucose from the glomerular filtrate in the kidney tubule is carried out by

- A) Osmosis
- B) Diffusion
- C) Active transport
- D) Brownian movement

**174)** \_\_\_\_\_ is not a sensory structures in cockroach.

- A) Eyes
- B) Antennae
- C) Anal cerci
- D) Proventriculus

**175)** Cretinism is due to

- A) Absence of insulin
- B) Excess growth hormone
- C) Excess adrenalin
- D) Hyposecretion of thyroid in childhood (Thyroxin)

**176)** According to IUCN Red list, during the last two decades, in which of the threatened species there is the maximum increases in the number?

- A) Amphibians
- B) Mammals
- C) Birds
- D) Reptiles

**177)** The exchange of gases ( $O_2$  and  $CO_2$ ) in a mammal takes place in

- A) Bronchus
- B) Trachea
- C) Bronchiole
- D) Alveoli

**178)** In case of  $C_4$  pathway

- A)  $CO_2$  combines with PGA
- B)  $CO_2$  combines with PEP
- C)  $CO_2$  combines with RMP
- D)  $CO_2$  combines with RuDP

**179)** Anticodon is

- A) Unpaired triplet of bases on rRNA
- B) Paired triplet of bases on messenger RNA
- C) Paired triplet of bases on rRNA
- D) An unpaired triplet of bases in an exposed position of tRNA

**180)** A plasmolysed cell can be deplasmolysed by placing it in

- A) Hyper tonic solution
- B) Isotonic solution
- C) Saturated solution
- D) Pure water or hypotonic solution

**181)** Which is the layer lining the lumen of the human alimentary canal?

- A) Sub-mucosa
- B) Serosa
- C) Muscularis
- D) Mucosa

**182)** \_\_\_\_\_ is a catadromous fish.

- A) *Mystus* sp
- B) *Hilsa* sp
- C) *Anguilla* sp
- D) *Channa* sp

**183)** In which one of the following would you expect to find glyoxysomes?

- A) Root hairs
- B) Endosperm of castor
- C) Palisade cells in leaf
- D) Endosperm of wheat

**184)** Afforestation with regard to urban development is called

- A) Integrated Forest Management
- B) Social forestry
- C) Both (1) and (2)
- D) None of these

**185)** A hypothetical chemical involved in the flowering of plants is

- A) Kinetin
- B) Gibberellin
- C) Indole acetic acid
- D) Florigen

**186)** The ankle, knee elbow joints are \_\_\_\_\_ joints.

- A) synovial
- B) hinge
- C) ellipsoid
- D) pivot

**187)** Casparian strip occurs in a (1994)

- A) endodermis
- B) exodermis
- C) pericycle
- D) epidermis

**188)** First link in any food chain is a green plant because

- A) Green plants can synthesize food
- B) Fixed at one place
- C) They can eat everything
- D) None of the above

**189)** \_\_\_\_\_ enzyme helps in transfer of phosphate group from ATP to a carbohydrate.

- A) ATPase
- B) Phosphatase
- C) Phosphorylase
- D) Catalase

**190)** How the chemosensitive area of respiratory centre in medulla is affected?

- A) Less by  $O_2$  and  $H^+$  ions.
- B) Less by  $CO_2$  and  $H^+$  ions
- C) Excess by  $CO_2$  and  $H^+$  ions
- D) Excess by  $O_2$  and  $H^+$  ions.

**191)** Tap roots are commonly found in

- A) Dicots
- B) Monocots
- C) Angiosperms
- D) Gymnosperms

**192)** Which one of the following is most essential for growth and formation of new cells?

- A) Proteins
- B) Sugar
- C) Mineral salts
- D) Vitamins

**193)** In presence of light, green plants convert carbon dioxide and water into food stuffs. Which of the following is likely to be the first substance that a green plant makes in photosynthesis?

- A) Fat
- B) Cellulose
- C) Starch
- D) A simple sugar

**194)** The term Anthesis is used for

- A) Dehiscence of anthers
- B) Opening of flowers
- C) Cluster of anthers
- D) Falling of flowers

**195)** Why government is so much relied on media to advertise about AIDS?

- A) to inform the public what is AIDS
- B) in the absence of effective vaccine social awareness is the only method to check the spread
- C) because there is pressure from public
- D) to enable public to isolate aid affected people

**196)** In a polluted environment, in which of the following, the maximum pollutant will occur?

- A) Primary consumers
- B) Tertiary consumers
- C) secondary consumers

D) Primary producers

**197)** Third ventricle of rabbit's brain is called

- A) Rhombocoel
- B) Rhinocoel
- C) Diocoel
- D) None of these

**198)** Fascicular cambium separates the xylem and phloem in which one of the following?

- A) Monocots only
- B) Dicots only
- C) Both dicots and monocots
- D) None of the above

**199)** Statement 1 : Cattle leech Hirudinaria is sanguivorous.

Statement 2 : Cattle leech possesses an anticoagulant hirudin.

- A) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- B) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- C) The statement 1 is true but the statement 2 is false
- D) Both the statement 1 and statement 2 are false

**200)** Bartholin's glands are homologous to which part of reproduction system?

- A) Bulbourethral glands
- B) Seminal vesicle
- C) Glans penis
- D) Prostate gland