PREVIEW QUESTION BANK(Single)

Module Name : NCET Language: ENGLISH
Section Name : 304-Biology Biological Studies Biotechnology Bioch
Exam Date : 29-Apr-2025 Batch : 15:00-18:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Ne M
Section : 304-Biology Biological Studies Biotechnology Bioch				
Topic : Topic 84				
Q.Type : Objective Question				
1	6005	Arrange the parts of anatropous ovule from micropylar end to chalazal pole. (A) Polar Nuclei (B) Antipodal Cells (C) Egg cell (D) Filliform apparatus Choose the **correct** answer from the options given below : (1) (D) → (C) → (A) → (B) (2) (A) → (B) → (C) → (D) (3) (B) → (C) → (A) → (D) (4) (C) → (A) → (B) → (D) (A) 1 (B) 2 (C) 3 (D) 4	4.0	
Q.Type : Objective Question				
2	6006	Wind and water pollinated flowers : (1) produce nectar and are brightly coloured. (2) produce nectar and are not colourful. (3) do not produce nectar and are not colourful (4) do not produce nector and are colourful (A) 1 (B) 2 (C) 3 (D) 4	4.0	
Q.Type : Objective Question				
3	6007		4.0	

Match **List - I** with **List - II**.

	List - I (Hormones)		**List - II (Released from)**
(A)	Oxytocin	(I)	Placenta
(B)	Relaxin	(II)	Corpus luteum
(C)	hCG	(III)	Pituitary
(D)	Progesterone	(IV)	Ovary

Choose the **correct** answer from the options given below :

(1) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

(2) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

(3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

4 | 6008 | 4.0

The fluid filled cavity which is a characteristic feature of tertiary follicle is called as :

(1) Zona pellucida

(2) Antrum

(3) Perivitelline space

(4) Corona radiata

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

5 | 6009 | 4.0

The population of India at the time of independence was approximately 350 million and crossed 1.2 Billion in May 2011. Select the probable reasons for the same from the following :

(A) Decline in maternal mortality rate

(B) Decrease in IMR

(C) Increase in IMR

(D) Increase in number of people in the reproductive age group

Choose the **correct** answer from the options given below :

(1) (A), (B) and (C) Only

(2) (B) and (D) Only

(3) (A) and (C) Only

(4) (A), (B) and (D) Only

(A) 1

(B) 2

		(C) 3 (D) 4	

Q.Type : Objective Question

6	6010	Which of the following is **not** a barrier method of contraception ? (1) Progestogens administration (2) Cervical caps (3) Diaphragm (4) Vaults (A) 1 (B) 2 (C) 3 (D) 4	4.0

Q.Type : Objective Question

7	6011	Which of the following is **not** a characteristic feature of Down's syndrome ? (1) Palm crease (2) Furrowed tongue (3) Gynaecomastia (4) Small round head (A) 1 (B) 2 (C) 3 (D) 4	4.0

Q.Type : Objective Question

8	6012	Which of the following is **not** true with respect to honey bees ? (1) They show haplodiploid sex-determination system. (2) Unfertilised egg forms drone by parthenogenesis. (3) Males produce sperm by meiosis. (4) Females have two sets of chromosomes. (A) 1 (B) 2 (C) 3 (D) 4	4.0

Q.Type : Objective Question

9	6013		4.0

Matthew Messelson and Franklin Stahl performed an experiment for DNA replication to prove that :

(1) *E. Coli* divides in 20 minutes
(2) RNA replicates semiconservatively
(3) DNA is double stranded
(4) DNA replicates semiconservatively

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

10 | 6014 | 4.0

Which of the following statements are true with respect to regulation of gene expression in eukaryotes. Regulation can be at :

(A) translational level
(B) replication level
(C) transcriptional level
(D) processing level (regulation of splicing)

Choose the **correct** answer from the options given below :

(1) (B) and (D) Only
(2) (A) and (C) Only
(3) (A), (B) and (C) Only
(4) (A), (C) and (D) Only

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

11 | 6015 | 4.0

The sequence of coding strand in a transcription unit is 5'-TCGAGGTCA-3' what is the sequence of mRNA transcribed ?

(1) 5'-AGCTCCAGT-3'
(2) 5'-UCGUGGTCA-3'
(3) 5'-UCGAGGUCA-3'
(4) 5'-UGCTCCAGC-3'

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

12 | 6016 | 4.0

According to Oparin and Haldane the formation of life was preceeded by chemical evolution under the following conditions on earth.

(1) High temperature, volcanic storms, oxidising atmosphere containing methane, oxygen etc.
(2) Volcanic storms, low temperature, reducing atmosphere containing ammonia, methane etc.
(3) High temperature, volcanic storms, reducing atmosphere containing methane, ammonia etc.
(4) High temperature, volcanic storms, oxidising atmosphere containing ammonia, oxygen etc.

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

13 | 6017 | 4.0

Match **List - I** with **List - II**.

	List - I **Term**		**List - II** **Relations**
(A)	Allergen	(I)	Released by mast cells
(B)	Colostrum	(II)	IgE antibodies
(C)	Histamine	(III)	reduces allergy symptoms
(D)	Adrenalin	(IV)	IgA antibodies

Choose the **correct** answer from the options given below :

(1) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
(2) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
(3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
(4) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

14 | 6018 | 4.0

α-interferon is :

(1) a biological response modifier
(2) used in radiation therapy
(3) an opioid
(4) a barbiturate

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

15 | 6019 | 4.0

'Swiss Cheese' has characteristic large holes in it. The causal organism for this characteristic is :

(1) *Saccharomyces cerevisiae*
(2) *Propionibacterium sharmanii*
(3) *Lactobacillus lactobacilli*
(4) *Clostridium butylicum*

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

16 | 6020 | 4.0

Which among the following is a fungal biocontrol agent ?

(1) *Bacillus thuringiensis*
(2) *Trichoderma*
(3) *Azospirillum*
(4) *Oscillatoria*

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

17 | 6021 | 4.0

Match **List - I** with **List - II**.

List - I **Microorganisms**		**List - II** **Product**
(A) *Trichoderma polysporum*	(I)	Streptokinase
(B) *Streptococcus sp.*	(II)	Citric acid
(C) *Aspergillus niger*	(III)	Statins
(D) *Monascus purpureus*	(IV)	Cyclosporin A

Choose the **correct** answer from the options given below :

(1) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)
(2) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
(3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
(4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

18 | 6022 | 4.0

Identify the correct sequence of events in large production of foreign gene product through recombinant DNA technology in order of their occurence.

(A) Fragmentation of DNA by restriction endonucleases at specific locations

(B) Obtaining the foreign gene product

(C) Isolation of desired DNA fragment and its ligation in vector

(D) Isolation of the genetic material i.e. DNA

(E) Culturing the host cell post recombinant DNA insertion

Choose the **correct** answer from the options given below :

(1) (B), (E), (A), (D), (C)

(2) (D), (A), (C), (E), (B)

(3) (C), (D), (B), (A), (E)

(4) (D), (A), (E), (C), (B)

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

19 | 6023 | 4.0

Which statement is correct about down stream processing ?

(1) It involves bubbling of sterilized air in the bioreactor

(2) It involves synthesis of bio-product in a simple stirred tank bioreactor

(3) It involves preparation of media for culturing desired cells

(4) It involves separation and purification of the product after completion of biosynthetic phase in a bioreactor

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

20 | 6024 | 4.0

Match **List - I** with **List - II**.

	List - I **Term**		**List - II** **Relation**
(A)	RNA interference	(I)	*cry* gene product
(B)	Bt toxin	(II)	HIV detection technique
(C)	PCR	(III)	Cellular defense method
(D)	GEAC	(IV)	Deciding body for GM research

Choose the **correct** answer from the options given below :

(1) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(2) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(3) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

(4) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

21 | 6025 | 4.0

What are the different ways by which food production can be increased ?
(A) Organic agriculture
(B) Agrochemical based agriculture
(C) Shifting agriculture
(D) Genetically engineered crop-based agriculture
Choose the **correct** answer from the options given below :
(1) (A), (B) & (D) Only
(2) (B), (C) & (D) Only
(3) (A) & (B) Only
(4) (A) & (D) Only

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

22 | 6026 | 4.0

What is the role of transgenic animals in producing biological products ?
(1) to test for toxicity of drugs
(2) to ensure safety of vaccines on humans
(3) to produce useful products like α-1-antitrypsin
(4) to develop transgenic models for human diseases like cystic fibrosis

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

23 | 6027 | 4.0

Select the organisms which breed only once in their life time.
(A) Mammals
(B) Bamboo
(C) Pacific salmon fish
(D) Oysters
Choose the **correct** answer from the options given below :
(1) (A) & (D) Only
(2) (B), (C) & (D) Only
(3) (B) & (C) Only
(4) (A), (C) & (D) Only

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

24 | 6028 | 4.0

If N is the population density at time t then its density at time t+1 is :

(1) $N_{t+1} = N_t - [(B+I) - (D+E)]$

(2) $N_{t+1} = [(B+I) - (D+E)] - N_t$

(3) $N_{t+1} = N_t + [(B+I) - (D+E)]$

(4) $N_{t+1} = N_t + [(D+E) + (B+I)]$

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

25 | 6029 | 4.0

In most ecosystems, all the pyramids (number, energy and biomass) are upright. Identify the exceptions to this from the following :

(A) Insects feeding on a big tree.

(B) Carnivores feeding on herbivores in a grassland.

(C) Zooplanktons depending on standing crop of phytoplanktons

(D) Fish feeding on phytoplanktons in sea

Choose the **correct** answer from the options given below :

(1) (B) and (D) Only

(2) (A), (C) and (D) Only

(3) (A), (B) and (C) Only

(4) (C) and (D) Only

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

26 | 6030 | 4.0

The number of tropic levels in grazing food chain is limited because :

(1) Only 10 percent of energy is transferred from higher to lower trophic level

(2) Only 20 percent of energy is transferred from higher to lower trophic level

(3) Only 10 percent of energy is transferred from lower to higher trophic level

(4) Only 20 percent of energy is transferred from lower to higher trophic level

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

27 | 6031 | 4.0

Clearing of Amazon rain forest by cutting trees for cultivating soyabeans or for conversion to grasslands for raising beef cattle is an example of :

(1) Alien-species invasion
(2) Over exploitation
(3) Habitat loss and fragmentation
(4) Co-extinction

(A) 1

(B) 2

(C) 3

(D) 4

Q.Type : Objective Question

28 | 6032 | 4.0

In 'rivet popper hypothesis' used by ecologist Paul Ehrlich, if airplane is an ecosystem then rivets are :

(1) Area
(2) Species
(3) Genera
(4) Biomes

(A) 1

(B) 2

(C) 3

(D) 4