

EVERWIN MATRIC. HR. SEC. SCHOOL

14.08.19 T.T Biology Marks: 30
 STD: XII (A,B,D) Bio-Botany Time: 45 Mins

I. Answer any 5 of the following questions: 5x2=10

- List out the applications of somatic Embryogenesis.
- What is Synthetic or Syn seeds?
- Define Totipotency.
- Outline the flowchart of Plant regeneration pathway.
- Mention the applications of plant tissue culture.
- List out the medium used in plant tissue culture.

II. Answer any 1 of the following questions: 1x5=5

- Micropropagation protocol for banana.
- How will you avoid the growing of microbes in nutrient medium during culture process? What are the techniques used to remove microbes?

Bio-Zoology

I. Answer any two of the following: 2x2=4

- What is meant by Atavism?
- Explain the "Theory of use and disuse".
- What are connecting links?

II. Answer any two of the following: 2x3=6

- Write a note on Analogous structure.
- Explain ontogeny recapitulates phylogeny.
- Write a note on fossils formed by Actual remains.

IV. Answer any one of the following: 1x5=5

- Explain the Urey Miller Experiment with diagram.
- Explain on any four theories of origin of life.

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14.08.19 T.T Maths Marks: 30
 STD: XII (C&E) Time: 45 Mins

I. Choose the correct answer: 5x1=5

1. $\sin^{-1}\frac{3}{5} - \cos^{-1}\frac{12}{13} + \sec^{-1}\frac{5}{3} - \operatorname{cosec}^{-1}\frac{13}{17} =$ _____

- a) 2π b) π c) 0 d) $\tan^{-1}\frac{12}{65}$

2. The domain of the function defined by $f(x) = \sin^{-1}\sqrt{x-1}$ is

- a) [1, 2] b) [-1, 1] c) [0, 1] d) [-1, 0]

3. $\sin^{-1}(\cos x) = \frac{\pi}{2} - x$ is valid for _____

- a) $-\pi \leq x \leq 0$ b) $0 \leq x \leq \pi$ c) $\frac{-\pi}{2} \leq x \leq \frac{\pi}{2}$ d) $\frac{-\pi}{4} \leq x \leq \frac{3\pi}{4}$

4. $\tan^{-1}\left(\frac{1}{4}\right) + \tan^{-1}\left(\frac{2}{9}\right)$ is equal to _____

- a) $\frac{1}{2}\cos^{-1}\left(\frac{3}{5}\right)$ b) $\frac{1}{2}\sin^{-1}\left(\frac{3}{5}\right)$ c) $\frac{1}{2}\tan^{-1}\left(\frac{3}{5}\right)$ d) $\tan^{-1}\left(\frac{1}{2}\right)$

5. If $\cot^{-1}(\sqrt{\sin \alpha}) + \tan^{-1}(\sqrt{\sin \alpha}) = \alpha$, then $\cos 2\alpha$ is equal to _____

- a) $\tan^2 \alpha$ b) 0 c) -1 d) $\tan 2\alpha$

II. Answer any five of the following: 5x2=10

- Find $\tan^{-1}(-\sqrt{3})$
- Find $\tan(\tan^{-1}(2019))$
- Find the domain of $\frac{1}{2}\tan^{-1}(1-x^2) - \frac{\pi}{4}$
- Find the principal value of $\cot^{-1}(-1)$
- Find the principal value of $\sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$
- If $\cot^{-1}\left(\frac{1}{7}\right) = \theta$, find the value of $\cos \theta$.

III. Answer any five of the following: 5x3=15

- Show that $\cot^{-1}\left(\frac{1}{\sqrt{x^2-1}}\right) = \sec^{-1}x$, $|x| > 1$
- Find the value of $\sin^{-1}(-1) + \cos^{-1}\left(\frac{1}{2}\right) + \cot^{-1}(2)$
- Find the value of $\sec^{-1}\left(\frac{-2\sqrt{3}}{3}\right)$
- Find the domain of $\tan^{-1}\sqrt{9-x^2}$
- Prove that $\tan(\sin^{-1}x) = \frac{x}{\sqrt{1-x^2}}$, $-1 < x < 1$
- Find the value of $\tan\left[\cos^{-1}\left(\frac{1}{2}\right) - \sin^{-1}\left(\frac{-1}{2}\right)\right]$

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14.08.19 T.T Economics Marks: 30
STD: XII (H,I,J) Time: 45 Mins

I. Choose the correct answer: 10x1=10

1. Inflation means _____.
a) Prices are falling b) Prices are rising
c) Prices are remaining the same
2. Paper currency system is managed by the _____.
a) Central Government b) Central Monetary Authority
c) Banks
3. _____ is a decrease in the rate of inflation.
a) Stagflation b) Disinflation c) Deflation
4. Debit card is an example of _____.
a) Paper currency b) Plastic money c) Money
5. _____ inflation is in no-way dangerous to the economy.
a) Creeping b) Walking c) Galloping
6. Stagflation combines the rate of inflation with _____.
a) employment b) output c) stagnation
7. When prices rise slowly, we call it _____.
a) hyper inflation b) galloping inflation c) mild inflation
8. MV stands for _____.
a) Supply of legal tender money b) Supply of bank money
c) Total supply of money
9. During inflation, who are the gainers?
a) creditors b) wage and salary earners c) Debtors
10. The RBI headquarters is located at _____.
a) Chennai b) Mumbai c) Bengaluru

II. Answer any four of the following: 4x2=8

11. Define inflation.
12. What is commodity money?
13. What is Stagflation?
14. What is barter?
15. Define Money.

III. Answer any four of the following: 4x3=12

16. What is money supply?
17. Explain Demand-pull and Cost-push inflation.
18. Explain disinflation.
19. Write a note on metallic money.
20. What are the determinants of money supply?

IV. Answer the following questions: 2x5=10

21. Illustrate Fisher's Quantity theory of money.
22. Explain the functions of money.

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14.08.19 T.T Commerce Marks: 30
STD: XII (F&G) Time: 45 Mins

I. Answer the following questions:

1. Explain the managerial functions of HRM in detail. (8 Marks)
2. Explain the unique features of Human Resource. (8 Marks)
3. Explain the importance of HR. (6 Marks)
4. Define HRM. (4 Marks)
5. Write the meaning of HR and definition of Peter F Drucker. (4 Marks)

