

APRIL 2017

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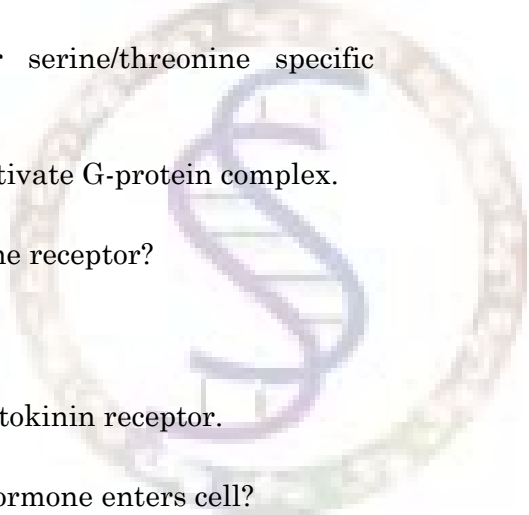
Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer any TEN questions.

Each question carries 1 mark.

1. Define Cross talk.
 2. Define receptor.
 3. What does protein kinase do?
 4. Give an example for serine/threonine specific protein kinase.
 5. Name the toxin that activate G-protein complex.
 6. What is trans membrane receptor?
 7. What is MAPK?
 8. Mention the types of cytokinin receptor.
 9. How does the steroid hormone enters cell?
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10. Where are steroid receptors located?
11. Which hormones bind to nuclear receptors?
12. What is amplification in signal transduction?

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

Each question carries 5 marks.

13. Explain the concept convergence with suitable example.
14. Brief the structure of PP2A.
15. Write short notes on GTPase switches.
16. Describe about TGF β -receptors.
17. How is nuclear receptor classified?
18. Write short notes on NF-KB.
19. Write the major classes of G-protein with their respective second messengers.

SECTION C — (4 × 10 = 40 marks)

Answer any FOUR questions.

Each question carries 10 marks.

20. How second messenger take part in the signal amplification pathway?
21. Describe the function of Ca^{2+} as a second messenger.
22. Explain how G-protein involved in signal transduction.
23. Give a detailed account on the structure and classification of protein kinase.
24. Explain briefly about the down modulation of receptor signalling.
25. Explain the mechanism of steroid hormones in cellular signalling.