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[A-40]

SARDAR PATEL UNIVERSITY

M. Sc. IG-IBT Xth Semester

IGBT: Integrated Biology Examination

Tuesday, 29/03/2016; Time-10:30 AM to 1:30 PM

SUBJECT CODE: PS10CIGIB1: Biopharmaceuticals and Biotherapeutics

Maximum Marks: 70

Note: All the questions are compulsory.
Figure to the right indicates mark of the question.

Q-1 Choose the appropriate answer of the following

[8×1] 08

1. Trypsin is extracted from:
a. Adrenal gland b. Pancreas
c. Leaves of cinchona d. None
2. Post-translational modification is often necessary to obtain:
a. Functional protein b. Non-functional protein
c. Inert d. None
3. Pharmacokinetics is the study of the:
a. drug's action over body b. body's action over drug
c. Administering of drug d. None
4. Enteral administration:
a. By mouth b. Intra-venous
c. Both d. None
5. Cytokines are produced in body:
a. In abundant quantity b. In minute quantity
c. Taken from outside d. None
6. Epidermal growth factor belongs to:
a. Chemokines family b. Haematopoietins family
c. TNF family d. EGF family
7. Heparin consist of:
a. Polypeptide backbone b. heteropolysaccharide chains attached
c. Both a & b d. None
8. Antithrombin is:
a. Natural inhibitor of coagulation b. Natural inhibitor of coagulation
c. Both a & b d. None

Q-2 Short Answer type questions. (Any seven)

[7X2] 14

1. Describe the use of r-DNA technology in the production of protein.
2. Discuss semisolid dosage forms in brief.
3. What are the major classes of biotechnology derived therapeutic agents.
4. How is First-pass hepatic metabolism affect the bioavailability?
5. Which are the different anticoagulants and thrombolytic agents?

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6. Define: Agonist and Antagonist.
7. Write biological activities of interleukin-1.
8. Enlist different gonadotrophins along with their roles.
9. Give the role of tPA in brief.
- Q3. A. What is post translational modification? Describe the modification needed for enhancement of pharmacokinetic properties. 06
- B. Write a note on ways of drug administration. 06
- OR
- B. Write a note on safety issues for biotechnology derived drugs. 06
- Q4. A. Describe the various sources of drugs. 06
- B. What is absorption? Describe the various Factors affecting absorption of drugs. 06
- OR
- B. Describe different properties of drugs that affect its mode of action. 06
- Q5. A. Describe biological activity of interleukin-2 along with its production 06
- B. Explain insulin production in detail. 06
- OR
- B. What are gonadotrophins? Explain FSH, LH and hCG functions in detail. 06
- Q6. A. Describe Haemostasis and Factor VIII in detail 06
- B. Describe Asparaginase and DNase enzymes in detail. 06
- OR
- B. Write a note on liposome mediated drug delivery. 06
