QP Code: RD17001069 Reg. No | | | | | | | | | | | AR 17

GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, December – 2020

(Seventh Semester)

BBTPC7041 – MEDICAL AND PHARMACEUTICAL BIOTECHNOLOGY

(Biotechnology)

Time: 2 hrs Maximum: 50 Marks

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions) (1 x 10 = 10 Marks)

Q.1. Answer ***ALL*** questions

a. How many classes of interferons are found in humans?

(i) 1 (ii) 2

(iii) 3 (iv) 4

b. Which of the following is the genetically engineered insulin?

(i) Humulin (ii)Rumulin

(iii) H-insulin (iv) R-insulin

c. (ii) What is the clinical application of monoclonal antibodies?

(iii) Biosensors (iv) Transplant rejection

(v) Infectious disease (vi) Purification of drugs

d. Who invented the process of producing monoclonal antibodies in 1975?

Albert Einstein Watson and Creek

Georges Köhler and César Milstein Robert Hook

e. Which of the following virus is not used in gene therapy?

(i) Papillomavirus (ii) Retrovirus

(iii) Adenovirus (iv) Herpes simplex virus

f. Introduction of DNA molecules into the recipient organism is termed as

(i) transformation (ii) translation

(iii) transduction (iv) transcription

g. What are the proteins structures called that are expressed within the cell membranes and interact with endogenous signalling molecules or some drugs to initiate an intracellular response?

(i) enzymes (ii) hormones

(iii) ligands (iv) receptors

h. Microarrays are also known as

(i) biochips (iii)DNA chips

(ii) gene chips (iii) all of the above

i. A primary role for antibodies in resistance to bacterial infection is

(i) antibody depended cell mediated cytotoxicity (ii) lysis of infected host cells

(iii) activation of alternative complement pathway (iv) opsonisation for increased uptake by phagocytic cells

j. Monoclonal antibodies currently used clinically

(i) Can protect against a wide variety of viruses and bacteria (ii) Canreduce the inflammation associated with rheumatoid arthritis

(iii) are derived from the plasma of individuals already immune to these organisms (iv) Each have broad specificity for many antigenic determinants

PART – B: (Short Answer Questions) **(2 x 5 = 10 Marks)**

Q.2. Answer ***ALL*** questions

a. What is ELISA?

b. What do you mean by new generation antibiotics?

c. What is DNA Vaccine?

d. What is toxicogenomics?

e. What is Protein engineering?

PART – C: (Long Answer Questions) **(6 x 5 = 30 Marks)**

Answer ***ANY FIVE*** questions Marks

3. Explain the production of Insulin by genetically engineered cells. (6)
4. What are the different techniques for development of new generation antibiotics? (6)
5. What are different types of enzymes used in clinical diagnosis? (6)
6. Explain the applications of biosensors in rapid clinical analysis (6)
7. What do you mean Proteomics? Explain its role in drug development. (6)
8. Explain the development of antibody based protein array for diagnosis (6)
9. What is the role of quality control in Pharmaceutical industry? (6)
10. What are different types of contamination, causes and prevention for Pharmaceutical Industry (6)

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