

6. Discuss the following recent inventions in biomedical instrumentation (any *two*) :

(a) AbioCor Artificial Heart

(b) Bio-Artificial Lever

(c) Camera Pill. 7.5+7.5=15

Unit IV

7. (a) What is the capital of knowledge ? What are the four basic types of intellectual property ? How intellectual capital would increase the value of a business ? 7.5

(b) What are the biggest challenges to innovation-managers in enterprises ? 7.5

8. (a) What is government's role in sparking innovation ? How governments can encourage innovation ? 7.5

(b) What are the aspects of scientific research proposal ? Briefly discuss the generalized skeleton of writing a research proposal for funding and grant. 7.5

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H101

B. Tech. EXAMINATION, May 2019

(Eighth Semester)

(B. Scheme) (Main & Re-appear)

(BME)

BME402B

INNOVATIVE BIOMEDICAL ENGINEERING

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) What is innovation ? What are the aims and types of innovation ? Briefly discuss. **7.5**
(b) What are the drivers of innovations ? What are the important contextual factors that have an impact on innovative opportunities ? **7.5**
2. (a) What are the innovation practices in healthcare industry ? How the innovation industry in healthcare is being evolved ? **7.5**
(b) What are the benefits and risk of innovation ? How the risk can be reduced ? **7.5**

Unit II

3. (a) What is product design and product development ? What are the stages of new product development in health sector ? **7.5**

- (b) What is design thinking and user-led innovation ? What is the role of lead users in new product development ? **7.5**
4. (a) What is brainstorming and why is it important in innovation ? Briefly discuss the brainstorming techniques. **7.5**
(b) What are the team dynamics ? How can you improve team dynamics ? How does team organization impact the innovation process ? **7.5**

Unit III

5. (a) What is Idea Generation ? When a new idea is generated ? What are the actions required to turn it into an innovation ? **7.5**
(b) How can experiments help with the refinement of an idea into an innovation ? Briefly discuss the process from identification of ideas to their implementation. **7.5**