



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**B TECH**  
**(SEM-V) THEORY EXAMINATION 2020-21**  
**HUMAN ENGINEERING AND SAFETY**

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

1. Attempt all questions in brief.

2 x 10 = 20

Qno.	Question	Marks	CO
a.	Define concept of System?	2	CO1
b.	What is Information input process?	2	CO1
c.	What do you mean by range of movements?	2	CO1
d.	Define human control of systems.	2	CO2
e.	Define the thermal comfort.	2	CO2
f.	What are the causes of air pollution?	2	CO1
g.	What is the use of chaff cutting?	2	CO1
h.	What do you mean by rehabilitation?	2	CO2
i.	Define familiarization?	2	CO1
j.	What do you mean by Operational safety?	2	CO1

**SECTION B**

2. Attempt any three of the following:

3 x 10 = 30

Qno.	Question	Marks	CO
a.	What human factors are to be considering in the development of system? Explain with suitable example.	10	CO2
b.	Explain the types of movement with suitable examples. Also define the Strength and accuracy.	10	CO3
c.	What arrangement and utilization of workspace is used in Anthropometry?	10	CO3
d.	What are compensations for accident victim in dangerous machine acts?	10	CO4
e.	Define the tractor testing? Explain the process.	10	CO4

**SECTION C**

3. Attempt any one part of the following:

a.	Define the basic processes in system development? Also define the human performance and performance reliability.	10	CO2
b.	Define the visual displays? What are its major types and Give the uses of displays?	10	CO2

4. Attempt any one part of the following:

a.	Discuss the Speech communication and Biomechanics of motion?	10	CO3
b.	Explain Human motor activities? How it is controls? What tools are used for it?	10	CO2

5. Attempt any one part of the following:

a.	What do you mean by Anthropometry? Give the atmospheric conditions for Anthropometry	10	CO3
b.	What is the thermo-regulation in human? Explain in brief.	10	CO4

6. Attempt any one part of the following:

a.	What are the regulations for Dangerous machine? Give the suitable example.	10	CO3
b.	What are the safety gadgets for spraying and threshing? Explain each of them.	10	CO4

7. Attempt any one part of the following:

a.	Define the Ergonomic considerations operational safety?	10	CO4
b.	Discuss the various engine test codes?	10	CO4