

Printed Pages : 3



EAG-017

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 180757

Roll No.

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

B. Tech.(SEM. VII) (ODD SEM.) THEORY
EXAMINATION, 2014-15**ERGONOMICS PRINCIPLES AND PRACTICES**

Time : 3 Hours]

[Total Marks : 100

Note : Attempt **all** questions.1 Attempt any **five** of the following : **4×5=20**

- (a) Define ergonomics. What is the role for humans ?
- (b) What are the major types and use of displays ?
- (c) What do you understand by human control of systems ?
- (d) Why a proper atmospheric condition is necessary for increasing the efficiency of work ?
- (e) What do you understand by anthropometry ?
- (f) List the safety gadgets for spraying the insecticides and weedicides.
- (g) What do you understand by speech communication ? Discuss in brief.

180757]

1

[Contd...

2 Attempt any **four** of the following : **5×4=20**

- (a) Why the rehabilitation and compensation is necessary to a accident victims ?
- (b) What do you understand by air pollution ? Name any five air pollutants.
- (c) What are the information input processes?
- (d) Briefly describe performance reliability.
- (e) How the arrangement and utilization of work space is necessary in relation with anthropometry ?

3 Attempt any **two** of the following : **10×2=20**

- (a) What are the important parameters reported by Hansson for design of workplace of a tractor operator?
- (b) Discuss in detail the “Operator-Machine Interface”.
- (c) Explain the Biomechanics of motion with the help of examples.

4 Attempt any **two** of the following : **10×2=20**

- (a) Write short notes on :
 - (i) Auditory and factual displays.
 - (ii) Range of movements.
 - (iii) Strength and endurance.
 - (iv) Human motor activities.

- (b) Discuss in detail the Dangerous machine (Regulation) acts of India.
 - (c) Explain the safety gadgets used for thresher, chaff cutter and Tractors.
- 5** Attempt any **two** of the following : **10×2=20**
- (a) What are the areas and importance of reliability? Discuss in detail.
 - (b) 100 oil filters of a tractor were placed on a test for 1000 hr and during these period 10 filters failed. Calculate the failure rate to provide a confidence of 95 per cent.
 - (c) Discuss the important considerations for ergonomic design of a tractor seat.
-