

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 01

B.Tech. (Sem. – 7th / 8th)

SPECIAL PURPOSE VEHICLES

SUBJECT CODE : AUE / AE - 410Paper ID : [A0728]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section – A**(10 × 2 = 20)**

- Q1)** a) What is a special purpose vehicle?
 b) What is the function of a shovel?
 c) What is a PTO shaft?
 d) What is a multi-axle vehicle?
 e) Why lubrication is necessary in vehicles?
 f) How does tyre help vehicle operation?
 g) What is tractive resistance?
 h) What is the purpose of universal joint?
 i) Name various methods of engine lubrication.
 j) Which type of braking system is used in earth moving machinery?

Section – B**(4 × 5 = 20)**

- Q2)** Differentiate between wheel type and track type special purpose vehicle.
Q3) Discuss the transmission system of any special purpose vehicle.
Q4) Discuss the basic characteristics of mobile cranes.
Q5) Draw and label the hydraulic control circuit used in any special purpose vehicle.
Q6) Discuss the auxiliary systems of a farm tractor.

Section – C**(2 × 10 = 20)**

- Q7)** Discuss the constructional features of an excavator.
Q8) Explain the steering system of a farm tractor with line diagram.
Q9) Write a note on Tracked vehicle.

