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**Question Paper Code: 54A03**

B.E./B.Tech. DEGREE EXAMINATION, DEC 2020

Fourth Semester

Agriculture Engineering

15UAG403 - FARM TRACTORS

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. The type of tractor which is used in marshy lands, hillside and garden are classified as CO1- R  
(a) General purpose      (b) Row crop      (c) Special purpose      (d) None
2. \_\_\_\_\_ is connected to the piston through the connecting rod that converts linear motion into rotational motion is called as CO1- R  
(a) Piston pin      (b) Crank shaft      (c) Cam shaft      (d) Connecting rod
3. The cooling system which makes use of a centrifugal pump to circulate water throughout the water jackets and radiator is called as CO2- R  
(a) Direct system      (b) Hopper system  
(c) Thermo syphone system      (d) Forced circulation
4. The commercial diesel fuels have got cetane rating varying from CO2- R  
(a) 30 to 40      (b) 30 to 50      (c) 30 to 60      (d) 30 to 70
5. The advantage of three- point linkage is/ are CO3- R  
(a) Easy control of equipments      (b) Quick setting of implements  
(c) Automatic hydraulic control of equipments      (d) All of the above

6. As per ASAE standard PTO speed is \_\_\_\_\_ CO3- R  
 (a)  $540 \pm 10$  rpm (b)  $550 \pm 10$  rpm (c)  $550 \pm 20$  rpm (d)  $540 \pm 40$  rpm
7. The working principle of hydraulic system is based on CO4- R  
 (a) Boyle's law (b) Stephen Boltzman's law (c) Pascal's law (d) Charle's law
8. Power transmission system consists of \_\_\_\_\_ CO4- R  
 (a) Differential (b) Final drive (c) Both a and b (d) None
9. Eastern Region Farm Machinery Training and Testing Institute is CO5- R  
 located in \_\_\_\_\_  
 (a) Budni (b) Sonitpur (c) Hisar (d) Anantpur
10. OECD Standard Test Code assess the tractor performance based on CO5- R  
 (a) Performance (b) Safety (c) Noise (d) All of the above

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Explain the constructional features of IC engine. CO1- U (8)
12. Explain the fuel supply system in spark ignition engine with suitable CO2- U (8)  
 diagram.
13. Explain in detail about types of transmission gear and torque convertor CO3- U (8)  
 gear with a labeled diagram.
14. Explain the principle, working, construction and types of hydraulic CO4- U (8)  
 system in detail.
15. Explain the preparation and testing procedure of tractor. CO5- U (8)

