

GUJARAT TECHNOLOGICAL UNIVERSITY**BE –SEMESTER- VIII- EXAMINATION- SUMMER 2020****Subject Code: 2180211****Date:29/10/2020****Subject Name: Special Purpose Vehicles****Time:02.30 pm to 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Discuss about power take off unit.	03
	(b) Write short note on comfort in special purpose vehicle.	04
	(c) Classify the special purpose vehicle and give the application of each.	07
Q.2	(a) Write short note on fire extinguishing vehicle.	03
	(b) Explain the working of hover craft.	04
	(c) Explain purpose, construction and working of Tippers in detail.	07
	OR	
	(c) Explain the working of pneumatic brake system with neat sketch.	07
Q.3	(a) What is fifth wheel mechanism?	03
	(b) Give the advantage and limitation of ripper.	04
	(c) What is PTO shaft? Explain 3 standard types of PTO shaft.	07
	OR	
Q.3	(a) Explain Road Roller.	03
	(b) List the types of crane and explain characteristic of truck crane.	04
	(c) Explain working principles of transmission system of special purpose vehicle.	07
Q.4	(a) What is Ergonomics?	03
	(b) Write short note on multi axle vehicles.	04
	(c) Describe dozer. Explain different types of dozer blades.	07
	OR	
Q.4	(a) Which different attachment is used in tractor?	03
	(b) Different between wheel and track type vehicle.	04
	(c) Explain working principle and design consideration of final drive.	07
Q.5	(a) Explain in brief articulated vehicle.	03
	(b) Explain construction feature of forklift.	04
	(c) Explain design consideration of electrical system of special purpose vehicle.	07
	OR	
Q.5	(a) Function of (1) Ripper,(2)Scraper,(3)Power shovel	03
	(b) Write short note on safety device of crane.	04
	(c) Explain economics of special purpose vehicle utilization.	07
