प्राविधिक सेवा, प्राविधिक समूह, सहायक द्वितीय, प्राविधिक सहायक (मेकानिकल वेल्डर) पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

२०८१

लिखित परीक्षा योजना

लिखित परीक्षा : **कुल पूर्णाङ्क :** १००

पत्र/विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या × अङ्क	समय
प्रथम	१००	४०	वस्तुगत - बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न × १ अङ्क	५० मिनेट
			विषयगत प्रश्न	१० प्रश्न × ५ अङ्क	१ घण्टा ४५ मिनेट

द्रष्टव्य :

1. लिखित परीक्षाको लागि १०० पूर्णाङ्कको एक पत्र हुनेछ्।
2. वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नको विकल्प छनौट गर्दा गलत विकल्प छानेमा ऋणात्मक मूल्याङ्कन (Negative Marking) गरिने छ। अर्थात् यसरी मूल्याङ्कन गर्दा प्रत्येक गलत उत्तरको लागि २० प्रतिशत अङ्ककट्टा गरिनेछ। बहुबैकल्पिक प्रश्नको २० प्रतिशत अङ्क प्राप्ताङ्कबाट घटाइने छ। (उदाहरणका लागि परीक्षार्थीले २० अङ्कको बहुबैकल्पिक प्रश्नमा १५ प्रश्नको सही उत्तर र ५ प्रश्नको गलत उत्तर दिएमा निजको प्राप्ताङ्क (०.२० × ५=१.००) अर्थात् १५–१= १४ अङ्क हुनेछ। तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन।
3. विषयगत प्रश्नको हकमा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ।
4. विषयगत प्रश्नमा प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन्। उम्मेदवारले प्रत्येक खण्डका प्रश्नको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ।
5. प्रत्येक पत्रको उत्तीर्णाङ्क पूर्णाङ्कको ४० प्रतिशत हुनेछ।
6. भाषा विषयबाहेक अन्य विषयका लागि उत्तरको माध्यम अंग्रेजी वा नेपाली हुनेछ।

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प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

पूर्णाङ्क: १०० समय: ३ घण्टा

1. **Workshop Practices**
   1.1 Basic knowledge of measuring instruments - Scale, Tri-square, Bevel Protractor Vernier Caliper, Micrometer, Gauges and Filler gauges
   1.2 Basic knowledge of Metric, FPS and SI Unit
   1.3 Basic knowledge of hand tools and their applications
   1.4 Basic knowledge of Lathe, Milling, Shaper, Grinding and Drilling Machine
   1.5 Basic knowledge of Arc welding and Oxy-acetylene welding 1.6. Basic knowledge of power transmission in workshop
2. **Welding and Sheet Metal Works**
   2.1 Different types of welding procedure and their applications
   2.2 Welding equipment, tools, accessories and types of electrodes
   2.3 Welding defects, causes and remedies
   2.4 Principle, Tools, Equipment and Procedure of soldering and brazing
   2.5 General Fitting - Male and Female Joints by Marking, Sawing, Chiseling, Cutting, Joining
   2.6 Marking, Cutting, Folding, Bending and Joining of Sheet Metal
3. **Introduction to Construction Equipment Types, Major Components and Parts**
   3.1 Dozer
   3.2 Loader
   3.3 Excavator
   3.4 Grader
   3.5 Truck
   3.6 Crane
   3.7 Roller
4. **Internal Combustion (I.C.) Engine**
   4.1 Two stroke and four stroke engines
   4.2 Main parts of engine and its functions
   4.3 Identification of symptoms for engine overhaul
   4.4 Troubleshooting and maintenance of I.C. engine
5. **Fuel system of I.C. Engine**
   5.1 Function of fuel injection pump
   5.2 Types of fuel injection pump and their parts
   5.3 Components of fuel injection system
   5.4 Function of carburetor
   5.5 Troubleshooting and maintenance of fuel injection pump and carburetor
6. **Cooling System**
   6.1 Importance and purpose of cooling system
   6.2 Component of cooling system and their function
   6.3 Knowledge about anti-freeze
   6.4 Troubleshooting and maintenance of cooling system
7. **Brake System**
   7.1 Purpose of brakes in a motor vehicle
   7.2 Types of brakes
   7.3 Component of braking system and their function
   7.4 Troubleshooting and maintenance of braking system

8. Suspension System

8.1 Introduction and use of suspension system
8.2 Component of suspension system
8.3 Troubleshooting and maintenance of suspension system

9. Steering System

9.1 Introduction to steering system
9.2 Mechanism of power steering
9.3 Troubleshooting and maintenance of steering system

10. Transmission System

10.1 Function of transmission system
10.2 Function of components of transmission system (gear box, clutch, propeller shaft, universal joint, differential)
10.3 Knowledge about torque converter
10.4 Troubleshooting and maintenance of transmission system

11. Hydraulic System

11.1 Introduction to hydraulic system
11.2 Components of hydraulic system
11.3 Troubleshooting and maintenance of hydraulic system

12. Track, Wheel and Tyres

12.1 Introduction and features of track, wheel and Tyres
12.2 Tyre sizes and rating
12.3 Troubleshooting and maintenance of Tyre and track

13. Servicing and Maintenance of Equipment

13.1 Basic knowledge on maintenance system
13.2 Importance of maintenance
13.3 General knowledge of different types of fuels and lubricants
13.4 Knowledge on periodic maintenance

14. Electrical System

14.1 General knowledge about electrical system and components
14.2 Maintenance of the battery
14.3 Knowledge about lights used in equipment and vehicles
14.4 Fuses and wiring system
14.5 Troubleshooting and maintenance of electrical components

15. Record Keeping

15.1 Importance of record keeping
15.2 Basic knowledge of maintenance Job Card

16. Safety Practices

16.1 Importance of safety

17 त्रि.वि ऐन र नियम सम्बन्धी सामान्य जानकारी

१७.१ त्रि.वि ऐन, २०४९
१७.२ त्रि.वि शिक्षक कर्मचारी सेवा सम्बन्धी नियम, २०५०

प्राविधिक सेवा, प्राविधिक समूह, सहायक द्वितीय, प्राविधिक सहायक (मेकानिकल वेल्डर) पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

(Specification Chart)

२०८१

वस्तुगत - बहुवैकल्पिक प्रश्न (५०)

खण्ड	एकाई	विषय शीर्षक	अङ्क	प्रश्न संख्या	प्रश्न संख्या × अङ्क भार
	1.	Workshop Practices	4	50	50 प्रश्न × 1 अङ्क
	2.	Welding and Sheet Metal Works	4		
	3.	Introduction to Construction Equipment Types, Major Components and Parts	4		
	4.	Internal Combustion (I.C.) Engine	3		
	5.	Fuel system of I.C. Engine	3		
	6.	Cooling System	3		
	7.	Brake System	3		
	8.	Suspension System	3		
	9.	Steering System	3		
	10.	Transmission System	4		
	11.	Hydraulic System	3		
	12.	Track, Wheel and Tyres	3		
	13.	Servicing and Maintenance of Equipment	3		
	14.	Electrical System	3		
	15.	Record Keeping	1		
	16.	Safety Practices	1		
	17.	त्रि.वि ऐन र नियम सम्बन्धी सामान्य जानकारी	2		
कुल जम्मा			50	50	

विषयगत प्रश्न (५०)

खण्ड	एकाई	विषय शीर्षक	अङ्क	प्रश्न संख्या	प्रश्न संख्या × अङ्क भार
	1.	Workshop Practices	5	10	10 प्रश्न × 5 अङ्क
	2.	Welding and Sheet Metal Works	5		
	3.	Introduction to Construction Equipment Types, Major Components and Parts	5		
	4.	Internal Combustion (I.C.) Engine	5		
	5.	Fuel system of I.C. Engine			
	6.	Cooling System	5		
	7.	Brake System			
	8.	Suspension System	5		
	9.	Steering System			

	10.	Transmission System	5		
	11.	Hydraulic System			
	12.	Track, Wheel and Tyres	5		
	13.	Servicing and Maintenance of Equipment			
	14.	Electrical System	5		
	15.	Record Keeping			
	16.	Safety Practices			
	17.	त्रि.वि ऐन र नियम सम्बन्धी सामान्य जानकारी	5		
कुल जम्मा			50	50	