

SYLLABUS FOR BCS (WRITTEN) EXAMINATION

AUTOMOBILE

Part-II

Marks- 100

- Safety Devices and Controls
 - Braking systems and their modern development
 - Wheels and tires
 - Springs and Suspension
 - Shock absorbers
 - Automotive body materials and vehicle shape
 - Steering systems
 - Reduction of injuries
 - Modern developments for economic speeds
- Automotive electrical systems and equipment
 - Storage battery and its construction
 - Cranking motor, alternator, indicators, and lighting;
 - Ignition system
 - Electrical safety devices, and accessories
 - Electrical and electronic control systems
- Environmental considerations
 - Vehicle emissions and control strategies
 - Noise pollution and control
 - Vehicle fuel economy
 - Testing of vehicles
 - Motor vehicle regulations

Tasaw

MAT

SYLLABUS FOR BCS (WRITTEN) EXAMINATION

AUTOMOBILE
(POST RELATED)
Subject Code: 903
Total Marks: - 200

Course Overview: This course provides an introduction to road vehicles and their components, including automotive engines, lubrication systems, fuel systems, ignition systems, electrical systems, power transmission and chassis, safety devices and controls, suspension, and environmental considerations.

Course Content:

Part-I **Marks-100**

- Fundamentals of Automobile Engineering
 - Introduction to road vehicles and their components
 - Overview of automotive engines and their types and construction
 - Friction in engines and automobile components and their lubrication systems
 - Overview of automotive fuel, fuel systems, and alternative fuels
 - Engine cooling and exhaust systems
 - Automotive heating and air conditioning system

- Power Transmission and Chassis
 - Clutch system and function
 - Manual and automatic transmission systems and their geometry
 - Gearbox and differentials
 - Final drives, drive lines, and universal joints
 - Axles

Taloni

RAE

SYLLABUS FOR BCS (WRITTEN) EXAMINATION

RESOURCE MANAGEMENT AND ENTREPRENEURSHIP

(POST RELATED)

Subject Code: 622

Part-I

Marks-100

1. Basic concept of Resources:

- a) Definition and characteristics of resources, Classification of resources (i) Human versus non human (ii) Resources classified by their sources (iii) Economic versus non economic resources
- b) Principles of using resources
- c) Factors influencing use of resources in family

2. Enterprise Resource management:

- a) Production Management
- b) Sales and Operation Management
- c) Supply Chain Management
- d) Demand Management
- e) Logistics and Distribution Management
- f) Project Management
- g) Quality Management

3. Creativity and Business Ideas:

- a) Sources of New Ideas
- b) Methods of Generating Ideas
- c) Creative Problem Solving
- d) Opportunity Recognition
- e) Product Planning and Development Process
- f) E-Commerce and Business Start-Up

4. Basic concept of Management:

- a) Planning, Organizing, Controlling and evaluating
- b) Decision making— Crucial process of management, role of decision making in management, decision making process, the decision maker
- c) Motivation initiating management: Different theories of motivation, values, goals and standards

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5. Human Resource Management:

- a) Definition, functions and objectives of Human Resource Management
- b) Job analysis
- c) Recruitment of Human Resource
- d) Importance of training, Development of training program.
- e) Training methods, Evaluation of training effort.

6. Introduction to Design and Interior Decoration:

- a) Definition of interior Design and Interior Decoration, Difference between interior Design and Interior Decoration, Scope of Interior design
- b) Meaning of Interior space, Design Process, Design criteria: Function and purpose, Utility and economy, Form and Style
- c) Principles of Design: Properties, Scale, Balance, Harmony, Unity and Variety, Rhythm, Emphasis.
- d) Elements of Design: Dot, Line, Form, Texture, Colour.
- e) Interior Design elements: Floor, walls, ceiling, window & door, stairway, Furniture
- f) House planning: purpose, principles of house plan, factors considered for comfortable housing

7. Introduction to Landscaping:

- a) Definition and necessity of landscaping
- b) Modern approach of landscaping
- c) Design process— develop a plot plan, site analysis, activity analysis, design activity areas, implementing principles of design, plant selection and placement in landscape
- d) Maintenance of landscaping

8. Housing situation in Bangladesh:

- a) Nature of housing – traditional, modern and low cost building materials
- b) Nature of urban and rural housing in Bangladesh
- c) Impact of urbanization on housing
- d) Role of women in housing improvement
- e) Role of real estate in housing situation of Bangladesh.

9. Ecological Aspect of Resource Management:

- a) Meaning of Ecology and Ecosystem
- b) Major components of the environment, Brief history of earth, bio-geo-chemical cycles
- c) The effect of human activity on the global ecosystem
- d) Environmental pollution and disaster management

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- e) Family and Ecosystem: The basic characteristic of the family as an ecosystem
- f) Family's efforts to cope with the problems

10. Appropriate Technology for Better Living:

- a) Meaning and characteristics of appropriate technology
- b) Limitations and barriers
- c) Essential conditions for application of appropriate technology
- d) Significance of appropriate technology with special reference to developing countries
- e) Appropriate technology for the betterment of women
- f) Appropriate technology for safety at home: Providing proper sewerage and wiring of house, Safe drinking water and sanitation system,
- g) Appropriate technology for health: From first aid to simple techniques for nursing of different patients
- h) Energy and cost saving simple technology: Agro-based technology, solar cooker, solar dryer, solar panel, improved Chula, bio-gas plant, Building materials for low cost house, Recycle of leftover materials

11. Organizational Behavior:

- a) An overview on organizational behavior, Challenges and opportunities for organizational behavior
- b) Individual process in organizational behavior, Personality and job performance relationship, Perception and individual decision making, Motivation: from concept to application
- c) Group and Social Process, Group decision making, Understanding work teams, Communication and leadership in organization
- d) Organization dynamics: Change and Stress Management, Approaches for managing organizational change, overcoming stress situation

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RESOURCE MANAGEMENT AND ENTREPRENEURSHIP

Part-II

Marks- 100

1. Basic concept of Entrepreneurship:

- a) The concept of entrepreneurship, management and entrepreneurship, types and functions of entrepreneurship, factors determining the growth of entrepreneurship, role of entrepreneurship in economic development
- b) Theories and assistance for entrepreneurship development:
 - i) McClelland's Achievement theory
 - ii) Schumoeer's views on entrepreneurship

2. Development of Entrepreneurship:

- a) Factors and influence of entrepreneurship, Factors behind entrepreneurship growth, Sources of assistance to entrepreneur in Bangladesh
- b) The Individual entrepreneur: Entrepreneurial traits– Innovation, Risk taking, Self confidence, Hard work, Goal setting, accountability
- c) Entrepreneur back ground and characteristics, Role models and support system– Moral support and professional support network, Male versus female Entrepreneur.

3. Business plan:

- a) Planning as part of the business operation, Information Needs, Writing the business plan. Implementing the business plan.
- b) Legal aspects for the Entrepreneur: The need for the legal advice, Legal forms of organization, Contract law and tort law
- c) Organizational plan and financing the enterprise
- d) Risk Management: The concept of risk, Types of financial risks, Guide lines for handling risks, Devices to cope with risks
- e) Human Relations, Human needs and employees motivation, The entrepreneur as manager, Wage, Salary and fringe benefit policies.

4. Small Business Management:

- a) Characteristics of small business, Strength and weaknesses of small business, Stages of small business development, Environment of small business in Bangladesh, SWOT Analysis.
- b) Ethics and social Responsibilities, Entrepreneurs codes of ethics, Civil rights and employment discrimination
- c) The need for planning, General outline of a business plan, Business plan for project funding, Project idea, Sources of project idea

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d) Benefits and problems of buying out existing business, Choosing a product or service, Evaluation of an existing business, Setting price, Patents and patenting process, Copyright, Trademarks

5. Financing of small business:

- a) Financing plan, Sources of finance for small business
- b) Problems of small business financing in Bangladesh, Equity capital

6. Principles of Marketing:

- a) Introduction, Meaning, core concepts of marketing
- b) Philosophies and customer relationship management
- c) Marketing Process and Strategic Planning
- d) Consumer Markets and Consumer Buyer Behavior
- e) Product, Services and Branding Strategies

7. Consumer Behaviour and Education:

- a) Meaning and definition of consumer behavior
- b) Interdisciplinary dimensions of consumer behavior
- c) Environmental and Personal influence on Consumer liking behavior
- d) Social and cultural determinants
- e) Personal determinants
- f) Consumer rights and responsibilities

8. Analysis of consumer behavior:

- a) Utility analysis of consumer behavior (Marshallian theory of consumer behavior)
- b) Indifference curve analysis: budget line, income effect, substitution effect and price effect
- c) Elasticity of demand: price elasticity of demand, Income elasticity of demand, substitution elasticity of demand and demand and cross elasticity of demand

9. Women Entrepreneurship

- a) Concept of women entrepreneurship, growth of women entrepreneurship in Bangladesh, women's entrepreneurship in Asia
- b) Development of Women Entrepreneurship – Recent Trends: types of women entrepreneurs, creative practices and applications of technology for women entrepreneurs, benefits of technology for women entrepreneurship
- c) Creativity and Searching for Business Opportunities: Sources of new ideas, methods of generating ideas, creative problem solving

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d) Role of Women Entrepreneurship in Economic Development: Create employment, economic development, economic development of family, women's economic power, developing, learning and assessing.

10. Assessing Resources for the Growth from the External Sources:

- a) Using External Parties to help Grow a Business
- b) Franchising – advantages, disadvantages and types
- c) Investing in a Franchise
- d) Joint Ventures – types and factors affecting the success of joint venture
- e) Acquisitions – advantages, disadvantages, synergy and local acquisition candidates
- f) Mergers
- g) Overcoming Constraints by Negotiating for More Resources

Tubani

MAH