

प्रदेश लोक सेवा आयोग  
कोशी प्रदेश, बिराटनगर, नेपाल  
प्रदेश निजामती सेवा तथा स्थानीय सरकारी सेवा अन्तर्गतका प्राविधिक तर्फ इन्जिनियरिङ्ग सेवा, सिभिल समूह,  
जनरल, हाईवे, स्यानिटरी, इरिगेशन, हाइड्रोपावर, हाइड्रोलोजी उप-समूह, सहायकस्तर पाँचौ तहका पदको खुला  
प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

पाठ्यक्रमलाई निम्नानुसार विभाजन गरिएको छ :

परीक्षाको चरण	परीक्षाको किसिम	पूर्णाङ्क
प्रथम	लिखित परीक्षा (वस्तुगत)	१००
द्वितीय	लिखित परीक्षा (विषयगत)	१००
अन्तिम	अन्तर्वार्ता	३०

### परीक्षा योजना (Examination Scheme)

#### १. प्रथम चरण (First Phase): लिखित परीक्षा (Written Examination)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X अङ्क	समय
प्रथम	सेवा सम्बन्धी विषय	१००	४०	वस्तुगत: बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न X २ अङ्क	४५ मिनेट

#### २. द्वितीय चरण (Second Phase) : लिखित परीक्षा (Written Examination)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X अङ्क	समय
द्वितीय	सेवा सम्बन्धी विषय	१००	४०	विषयगत (Subjective)	लामो उत्तरात्मक ४ प्रश्न X १० = ४० छोटो उत्तरात्मक १२ प्रश्न X ५ = ६०	२ घण्टा ३० मिनेट

#### ३. अन्तिम चरण:- अन्तर्वार्ता (Interview)

विषय	पूर्णाङ्क	परीक्षण प्रणाली	समय
व्यक्तिगत अन्तर्वार्ता (Individual Interview)	३०	मौखिक (Oral)	-

द्रष्टव्य:-

- यो पाठ्यक्रम योजनालाई प्रथम चरण (लिखित परीक्षा: वस्तुगत), द्वितीय चरण (लिखित परीक्षा: विषयगत) तथा अन्तिम चरण (अन्तर्वार्ता) गरी तीन चरणमा विभाजन गरिएको छ।
- प्रश्न पत्र नेपाली वा अंग्रेजी भाषामा हुनेछ।
- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिने छ। तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन।
- परीक्षा हलमा मोबाइल फोन, स्मार्ट वाच, हेडफोन वा यस्तै प्रकारका विद्युतीय उपकरण, पुस्तक, नोटबुक, झोला लगायतका वस्तुहरू लैजान पाइने छैन।

६. विषयगत प्रश्नका लागि तोकिएका अङ्कका हकमा एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुईभन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्नअन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिनेछ।
७. परीक्षामा सोधिने प्रश्न संख्या, अङ्क र अङ्कभार यथासम्भव सम्बन्धित पत्र/विषयमा दिइए अनुसार हुनेछ।
८. द्वितीय पत्र (विषयगत प्रश्न हुने पत्र)का हकमा प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन्। परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डको उत्तर पुस्तिकामा लेख्नु पर्नेछ।
९. प्रथम र द्वितीय पत्रका पाठ्यक्रमका एकाईहरूबाट सोधिने प्रश्नहरूको संख्या देहाय अनुसार हुनेछ:

प्रथम पत्रका एकाई	१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४
प्रश्न संख्या	३	५	५	३	३	३	३	४	४	४	४	४	३	२
अङ्क भार	६	१०	१०	६	६	६	६	८	८	८	८	८	६	४
द्वितीय पत्र खण्ड	क							ख						
द्वितीय पत्रका एकाई	१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४
लामो उत्तर प्रश्न	०	१	०	०	०	०	०	०	१	१	१	०	०	०
छोटो उत्तर प्रश्न	१	०	२	१	१	१	१	२	०	०	०	१	१	१
अङ्क भार	५	१०	१०	५	५	५	५	१०	१०	१०	१०	५	५	५

१०. यस पाठ्यक्रम योजना अन्तर्गतका पत्र/ विषयका विषयवस्तुमा जेसुकै लेखिएको भएतापनि पाठ्यक्रममा परेका कानुन, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भइ हटाइएका वा थप गरी संशोधन भएका) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ।
११. प्रथम चरण (First Phase) को लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरण (Second Phase) को लिखित परीक्षामा सम्मिलित गराइनेछ।
१२. लिखित परीक्षाको प्रथम चरण (First Phase) मा प्राप्त गरेको प्राप्ताङ्कको शत प्रतिशत अङ्क तथा द्वितीय चरण (Second Phase) को प्राप्ताङ्क जोडी कूल अङ्कको आधारमा लिखित परीक्षाको नतिजा प्रकाशित गरिनेछ।
१३. लिखित परीक्षामा छनौट भएका उम्मेदवारहरूलाई मात्र अन्तिम चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ।
१४. लिखित परीक्षा र अन्तिम चरणको अन्तर्वार्ताको कूल अङ्क योगका आधारमा अन्तिम परीक्षाफल प्रकाशित गरिनेछ।
१५. पाठ्यक्रम लागू मिति:- २०८०/०२/२६

प्रदेश लोक सेवा आयोग

कोशी प्रदेश, बिराटनगर

प्रदेश निजामती सेवा तथा स्थानीय सरकारी सेवा अन्तर्गतका प्राविधिक तर्फ इन्जिनियरिङ्ग सेवा, सिभिल समूह, जनरल, हाईवे, स्यानिटरी, इरिगेशन, हाइड्रोपावर, हाइड्रोलोजी उप-समूह, सहायकस्तर पाँचौ तहका पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

**प्रथम र द्वितीय पत्र: सेवा सम्बन्धी विषय**

**खण्ड (क)**

**1. सामान्य ज्ञान र समसामयिक विषयहरू**

- 1.1. नेपालको भौगोलिक अवस्था, प्राकृतिक स्रोत र साधनहरू (कोशी प्रदेश विशेष)
- 1.2. नेपालको ऐतिहासिक, सांस्कृतिक र सामाजिक अवस्था सम्बन्धी जानकारी (कोशी प्रदेश विशेष)
- 1.3. नेपालको आर्थिक अवस्था र चालु संघीय तथा प्रादेशिक आवधिक योजना
- 1.4. जैविक विविधता, दिगो विकास, वातावरण, प्रदूषण, जलवायु परिवर्तन र जनसंख्या व्यवस्थापन
- 1.5. मानव जीवनमा प्रत्यक्ष प्रभाव पार्ने विज्ञान र प्रविधिका महत्वपूर्ण उपलब्धिहरू
- 1.6. नेपालको संविधान (भाग १ देखि ५ सम्म र अनुसूचीहरू)
- 1.7. सरकारी बजेट, लेखा र लेखापरीक्षण प्रणाली सम्बन्धी सामान्य जानकारी
- 1.8. प्रदेश तथा स्थानीय तहका कर्मचारीको सेवा सम्बन्धी कानूनहरू
- 1.9. कर्मचारीले पालन गर्नुपर्ने आचरण र कर्तव्यहरू
- 1.10. सार्वजनिक सेवा प्रवाहको अर्थ, सेवा प्रवाह गर्ने निकाय, तरिका र माध्यमहरू
- 1.11. स्थानीय सरकार संचालन ऐन, २०७४ को सामान्य जानकारी
- 1.12. सार्वजनिक खरिद सम्बन्धी जानकारी
- 1.13. भ्रष्टाचार निवारण ऐन, २०५९
- 1.14. प्रदेश सुशासन (व्यवस्थापन तथा संचालन) ऐन, २०७६ र सो को नियमावली, २०७९
- 1.15. नागरिक वडापत्र (Citizen Charter) : महत्व र आवश्यकता
- 1.16. सार्वजनिक व्यवस्थापनमा निर्देशन, नियन्त्रण, समन्वय, निर्णय प्रक्रिया र नेतृत्व सम्बन्धी जानकारी
- 1.17. कार्यालय व्यवस्थापन (Office Management)
  - 1.19.1. कार्यालयमा सञ्चारको महत्व, किसिम र साधन
  - 1.19.2. कार्यालय कार्यविधि (Office Procedure): पत्र व्यवहार (Correspondence), दर्ता र चलानी (Registration & Dispatch), परिपत्र (Circular), तोक आदेश (Order), टिप्पणी (Tippani)
  - 1.19.3. अभिलेख व्यवस्थापन (Record Management): निर्माणसँग सम्बन्धित

**2. Surveying:**

**2.1. General**

- 2.1.1. Classifications
- 2.1.2. Principle of surveying
- 2.1.3. Selection of suitable method
- 2.1.4. Scales, plans and maps
- 2.1.5. Entry into survey field books and level books

**2.2 Levelling**

- 2.2.1. Methods of levelling
- 2.2.2. Levelling instruments and accessories

- 2.2.3. Principles of levelling
- 2.2.4. Error of Adjustment
- 2.2.5. Field procedures, problems and plotting in graph
- 2.3. Plane Tabling**
  - 2.3.1. Equipment required
  - 2.3.2. Methods of plane tabling
  - 2.3.3. Two- and three-point problems
- 2.4. Theodolite and Traverse surveying**
  - 2.4.1. Basic difference between different theodolites
  - 2.4.2. Temporary adjustments of theodolites
  - 2.4.3. Fundamental lines and desired relations
  - 2.4.4. Tacheometry: stadia method
  - 2.4.5. Trigonometrical levelling
  - 2.4.6. Checks in closed traverse
  - 2.4.7. Error adjustment
- 2.5. Contouring**
  - 2.5.1. Characteristics of contour lines
  - 2.5.2. Method of locating contours
  - 2.5.3. Contour plotting
- 2.6. Setting Out**
  - 2.6.1. Small buildings
  - 2.6.2. Simple curves
- 3. Construction Materials**
  - 3.1. Stone**
    - 3.1.1. Formation and availability of stones in Nepal
    - 3.1.2. Methods of laying and construction with various stones
  - 3.2. Cement**
    - 3.2.1. Different cements: Ingredients, properties and manufacture
    - 3.2.1. Storage and transport
    - 3.2.1. Admixtures
  - 3.3. Clay and Clay Products**
    - 3.3.1. Brick: type, manufacture, laying, bonds
  - 3.4. Paints and Varnishes**
    - 3.4.1. Type and selection
    - 3.4.2. Preparation techniques
    - 3.4.3. Use
  - 3.5. Bitumen**
    - 3.5.1. Type
    - 3.5.2. Selection
    - 3.5.3. Use
    - 3.5.4. Test of Bitumen
  - 3.6. Hollow bricks /cement concrete bricks and other new construction materials**

## **4. Mechanics of Materials and Structures**

### **4.1. Mechanics of Materials**

- 4.1.1. Internal effects of loading
- 4.1.2. Ultimate strength and working stress of materials

### **4.2. Mechanics of Beams**

- 4.2.1. Relation between shear force and bending moment
- 4.2.2. Thrust, shear and bending moment diagrams for statically determinate beams under various types of loading

### **4.3. Simple Strut Theory**

## **5. Hydraulics**

### **5.1. General**

- 5.1.1 Properties of fluid: mass, weight, specific weight, density, specific volume, specific gravity, viscosity
- 5.1.2 Pressure and Pascal's law

### **5.2 Hydro-Kinematics and Hydro-Dynamics**

- 5.2.1 Energy of flowing liquid: elevation energy, Kinetic energy, potential energy, internal energy, energy head
- 5.2.2 Types of Flow

### **5.3 Measurement of Discharge**

- 5.3.1 Weirs and notches
- 5.3.2 Discharge formulas

### **5.4 Flows**

- 5.4.1 Characteristics and difference of pipe flow and open channel flow

## **6. Soil Mechanics**

### **6.1. General**

- 6.1.1. Soil types and classification
- 6.1.2. Three phase system of soil
- 6.1.3. Unit Weight of soil mass: bulk density, saturated density, submerged density and dry density
- 6.1.4. Interrelationship between specific gravity, void ratio, porosity, degree of saturation, percentage of air voids, air content and density index

### **6.2 Soil Water Relation**

- 6.2.1 Terzaghi's principle of effective stress
- 6.2.2 Darcy's law
- 6.2.3 Factors affecting permeability

### **6.3 Compaction of soil**

- 6.3.1 Factors affecting soil compaction
- 6.3.2 Optimum moisture content
- 6.3.3 Relation between dry density and moisture content

### **6.4 Shear Strength of Soils**

- 6.4.1 Mohr-Coulomb failure theory
- 6.4.2 Cohesion and angle of internal friction

### **6.5 Earth Pressures**

- 6.5.1 Active and passive earth pressures

6.5.2 Lateral earth pressure theory

6.5.3 Rankine's earth pressure theory

## **6.6 Foundation Engineering**

6.6.1 Terzaghi's general bearing capacity formulas and their application

## **7. Structural Design**

### **7.1. R.C. Sections in Bending**

7.1.1 Under reinforced, over reinforced and balanced sections

7.1.2 Analysis of single and double reinforced rectangular sections

### **7.2 Shear and Bond for R.C. Sections**

7.2.1 Shear resistance of a R.C. section

7.2.2 Types of Shear reinforcement and their design

7.2.3 Determination of anchorage length

### **7.3 Axially Loaded R.C. Columns**

7.3.1 Short and long columns

7.3.2 Design of a rectangular column section

### **7.4 Design and drafting of R.C. Structures**

7.4.1 Singly and doubly reinforced rectangular beams

7.4.2 Simple one-way and two-way slabs

7.4.3 Axially loaded short and long columns

## **खण्ड (ख)**

## **8. Building Construction Technology**

### **8.1. Foundations**

8.1.1. Subsoil exploration

8.1.2. Type and suitability of different foundations: Shallow, deep

8.1.3. Shoring and dewatering

8.1.4 Design of simple brick or stone masonry foundations

8.1.5 Components of Building construction

### **8.2 Walls**

8.2.1 Type of walls and their functions

8.2.2 Choosing wall thickness, Height to length relation

8.2.3 Use of scaffolding

### **8.3 Damp Proofing**

8.3.1 Source of Dampness

8.3.2 Remedial measures to prevent dampness

### **8.4 Concrete Technology**

8.4.1 Constituents of cement concrete

8.4.2 Grading of aggregates

8.4.3 Concrete mixes

8.4.4 Water cement ratio

8.4.5 Factors affecting strength of concrete

8.4.6 Form work

8.4.7 Curing, methods of curing and its importance

## **8.5 Wood work**

- 8.5.1 Frame and shutters of door and window
- 8.5.2 Timber construction of upper floors
- 8.5.3 Design and construction of stairs

## **8.6 Flooring and Finishing**

- 8.6.1 Floor finishes: brick, concrete, flagstone
- 8.6.2 Plastering

## **9. Water Supply and Sanitation Engineering**

### **9.1. General**

- 9.1.1. Objectives of water supply system
- 9.1.2. Source of water and its selection: gravity and artesian springs, shallow and deep wells; infiltration well and galleries
- 9.1.3 Components of water supply system

### **9.2 Gravity Water Supply System**

- 9.2.1. Design period
- 9.2.2. Determination of daily water demand
- 9.2.3. Determination of storage tank capacity
- 9.2.4. Intake
- 9.2.5. Selection of pipe for transmission and distribution
- 9.2.6. Hydraulic grade line, pipeline design
- 9.2.7. BPT, washout, valves, chambers, private connection and public stand posts

### **9.3 Pumping/ Lifting water supply system**

- 9.3.1. Pipe and fittings used in Pumping/ Lifting system
- 9.3.2. Basic knowledge on Electromechanical equipment (Type of Pump, motor, panel board, High tension line etc) used in lifting water supply system.
- 9.3.3. Basic knowledge on alternative energy (eg. Solar, Generator etc)

### **9.4 Water Quality and Water Treatment System**

- 9.4.1. Quality of water: Types and sources of water pollution, pollution of ground water, living organism in water, water borne diseases, physical, chemical, and biological test of water, water quality standard: Nepal standard (NS)
- 9.4.2. Water treatment system (Screening, Sedimentation tank, Roughing Filter, Slow Sand/Rapid Sand Filter/Pressure filter, Disinfection, Miscellaneous treatment), Bio-sand filter, Chlorine dosing

### **9.5 Design of Sewer**

- 9.5.1. Quantity of storm and sanitary sewage
- 9.5.2. Maximum, Minimum and self-cleaning velocity

### **9.6 Excreta Disposal and Unsewered Area, solid waste management**

- 9.6.1 Pit latrine, VIP latrine
- 9.6.2 Design of septic tanks and soak pits, Decentralized waste water treatment system (DEWATS)
- 9.6.3 Methods of solid waste disposal: dumping, sanitary landfill, incineration and composting

### **9.7 Role of Water User's Committee and Operation and maintenance of water supply system**

## **10. Irrigation Engineering**

### **10.1 General types of irrigation systems**

- 10.1.1 Irrigation Act 2075 (Koshi Province)
- 10.1.2 Advantages and Disadvantages of irrigation
- 10.1.3 New technologies in irrigation i.e. drip, sprinkler etc.

### **10.2 Water Requirement**

- 10.2.1 Crop season and principal crops
- 10.2.2 Base period, crop water requirements, delta and duty

### **10.3 Flow irrigation Canals**

- 10.3.1 Canal losses and their minimization
- 10.3.2 Maximum and minimum velocities
- 10.3.3 Design of irrigation canal section based on manning's formula
- 10.3.4 Need and location of spillways
- 10.3.5 Head works for small canals
- 10.3.6 Design criteria for hill irrigation
- 10.3.7 Farmer managed irrigation system
- 10.3.8 Components of Irrigation system

## **11. Highway Engineering**

### **11.1 General**

- 11.1.1 Introduction to transportation systems
- 11.1.2 Historic development of roads
- 11.1.3 Classification of road in Nepal
- 11.1.4 Provincial Public Road Act, 2077 of Koshi Province
- 11.1.5 Basic requirements of road alignment
- 11.1.6 components of Road network
- 11.1.7 Transport Master Plan (Province, Local)

### **11.2 Geometric Design**

- 11.2.1 Basic design control and criteria for design
- 11.2.2 Elements of cross section, typical cross-section for all roads in filling and cutting
- 11.2.3 Camber
- 11.2.4 Determination of radius of horizontal curves
- 11.2.5 Super elevation
- 11.2.6 Sight distances
- 11.2.7 Gradient
- 11.2.8 Use of Nepal Road Standard and subsequent revision in road design

### **11.3 Drainage System**

- 11.3.1 Importance of drainage system and requirements of a good drainage system

### **11.4 Road Pavement**

- 11.4.1 Pavement structure and its components: subgrade, sub-base, base and surface courses

### **11.5 Road Machineries**

- 11.5.1 Earth moving and compacting machines and its suitability



## **11.6 Road Construction Technology**

### **11.7 Bridge**

- 11.7.1 T-beam bridge, slab bridge, box culverts
- 11.7.2 Timber bridges
- 11.7.3 Trail bridges (suspension, suspended, truss)

### **11.8 Road Maintenance and Repair**

- 11.8.1 Type of maintenance Works

### **11.9 Tracks and Trails**

### **11.10 Low-cost roads**

## **12. Estimating and Costing**

### **12.1 General**

- 12.1.1 Main items of work
- 12.1.2 Units of measurement and payment of various items of work and material
- 12.1.3 Standard estimate formats of government offices
- 12.1.4 Estimate of Repair and maintenance of civil works

### **12.2 Estimating and Rate Analysis**

- 12.2.1 Preparation of rate analysis based on **district rate and** norms approved by authorized body

### **12.3 Specifications**

- 12.3.1 Specifications for different types of works and its interpretation

### **12.4 Valuation**

- 12.4.1 Methods of valuation
- 12.4.2 Basic knowledge on standard formats for valuation

## **13. Construction Management**

### **13.1 Organization**

- 13.1.1 Need for organization
- 13.1.2 Responsibilities of a civil sub engineer
- 13.1.3 Relation between Owner, Contractor and sub-Engineer

### **13.2 Site Management**

- 13.2.1 Preparation of site plan
- 13.2.2 Organizing labour
- 13.2.3 Measures to improve labor efficiency
- 13.2.4 Accident prevention, Labour camps, primary health care

### **13.3 Contract Procedure**

- 13.3.1 Contracts
- 13.3.2 Departmental works and day-work
- 13.3.3 Types of contracts, Standard bid documents, preparation of bid documents
- 13.3.4 Tender notice and tender
- 13.3.5 Earnest money and security deposit
- 13.3.6 Preparation before inviting tender
- 13.3.7 Agreement
- 13.3.8 Conditions of contract (GCC, SCC)

13.3.9 Construction planning and supervision

#### **13.4 Accounts**

13.4.1 Administrative approval and technical sanction

13.4.2 Familiarity with standard account keeping formats used in governmental organizations

13.4.3 Muster roll

13.4.4 As built drawing, Completion report (Works, Projects)

#### **13.5 Planning and Control**

13.5.1 Construction schedule

13.5.2 Equipment and materials schedule

13.5.3 Construction stages and operations

13.5.4 Basic knowledge of project planning Tools (Bar chart, CPM, PERT, MS etc.)

### **14. Airport Engineering**

#### **14.1 General**

14.1.1 Introduction to Air Transport System

14.1.2 Historic development of Airports in Nepal

14.1.3 Classification of Airports

14.1.4 Airport terminologies

#### **14.2 Design**

14.2.1 Basic design control and criteria for design

14.2.2 General items contained in ANNEX 14 (ICAO Publication)

14.2.3 Planning of Airport and its elements

14.2.4 Terminal Building and Control Tower

14.2.5 Drainage System

14.2.6 Geometric design, pavement structure and its component

14.2.7 Basic knowledge of Heliport and Hangers

#### **14.3 Airport Maintenance**

14.3.1 Types of maintenance

14.3.2 Methods of maintenance

### Model Questions (MCQs)

1. The hardest rock is  
A. Marble  
B. Talc  
C. Diamond  
D. Quartz
2. Hooke's Law holds good upto:  
A. Yield point  
B. Elastic limit  
C. Plastic Limit  
D. Breaking point
3. A Lysimeter is used to measure  
A. Infiltration  
B. Evaporation  
C. Evapotranspiration  
D. Radiation
4. The grade of concrete M20 Means that the compressive strength of a 15 cm cube after 28 days would be.....  
A. 5N/sq mm  
B. 10 N/sq mm  
C. 15N/sq  
D. 20N/sq mm
5. The slump test is used to determine which of the following properties of concrete  
A. Shrinkage  
B. Strength  
C. Workability  
D. Durability

### Model Question (Subjective)

1. What are the principles of surveying? Write short notes on different methods of levelling?  
[5+5 Marks]
2. What are the differences between pipe flow and open channel flow?  
[5 Marks]
3. How do you treat turbid water especially in rainy season from stream intake? which method is applied for pathogen removal before distribution?  
[8+2 Marks]
4. What are the methods of minimizing losses of water in canal? Briefly describe the location and need of spill way?  
[5+5 Marks]