



WINTER-19 EXAMINATION

MODEL ANSWER

Subject Code

22505

Subject: Rural Development

- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors etc... should not be given more Importance (Not applicable for subject English and Communication Skills).
- 4) While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.
- 6) In case of some questions credit may be given by judgment on part of examiner of relevant answer based on candidate's understanding.
- 7) For programming language papers, credit may be given to any other program based on equivalent concept.

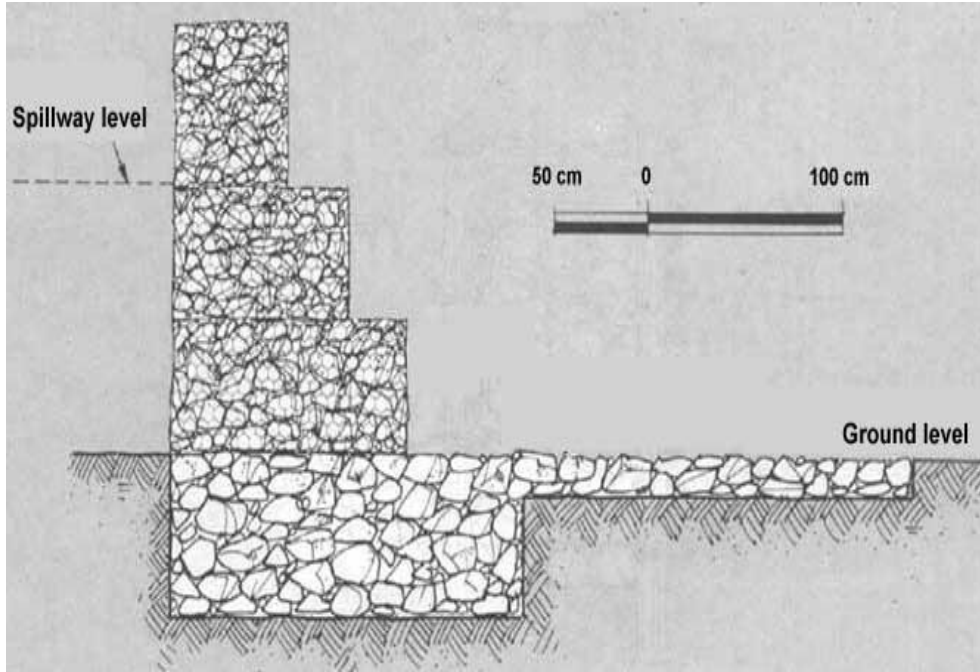
Que. No.	Sub Que.	Model Answer	Marking Scheme	Total Marks
1		Attempt any FIVE of the following:		10
	a) Ans.	State objectives of rural development Objectives of rural development are: 1) To develop rural areas in respect of culture, economy, technology and public health 2) To develop infrastructure facility like road, railway, bridge 3) To develop job opportunities 4) To develop rural business skills 5) To upgrade standard of living of people in rural areas 6) To develop educational institutions and to provide skills and knowledge to people of rural areas 7) To provide clean water to villages, bring transportation and electricity to villages 8) To provide financial assistance to artisans from rural areas 9) To guide farmers for better yield of crops 10) To develop small scale industries 11) To develop cottage industries and handicrafts 12) To improve the participation of people from villages at national and international level	Any 2 (1 mark each)	



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1	b) Ans.	<p>List any four watershed management structures.</p> <p>Watershed management structures are:</p> <ul style="list-style-type: none"> i) K. T. (Kolhapur Type) weir ii) Gabian structure iii) Cement plug iv) Contour bunding v) Farm ponds vi) Underground bandhara 	<p>Any 4 ½ marks each</p>	
	c) Ans.	<p>State the objectives of credit-cum-subsidy scheme of rural housing.</p> <p>This is a Rural Housing scheme to provide shelter to poor rural people who are living below poverty line (BPL). It is part credit and part subsidy-based scheme. Its objectives are</p> <ul style="list-style-type: none"> i) To facilitate construction of houses for rural families who have some repayment capacity ii) To eradicate shelter lessness from rural areas of the country iii) To provide shelter to rural families who have not been covered under Indira Awas Yojna (IAY) and desire to possess a house iv) All rural households having annual income of INR 32000 are covered under this scheme. 	<p>1 mark each (Any two)</p>	
	d) Ans.	<p>List any four cottage industries.</p> <p>A cottage industry is a small-scale decentralized manufacturing business operated from home and not in a big factory premise. They include:</p> <ul style="list-style-type: none"> i) Brick manufacturing ii) Concrete hollow block manufacturing iii) Artificial sand manufacturing iv) Stone crushing plant <p>Marks can also be given if the student mentions the following industries not related to civil engineering</p> <ul style="list-style-type: none"> i) Handicrafts ii) Dried fruits iii) Dried fishes iv) Decorative home furnishings v) Papad, pickles etc 	<p>Any 4 ½ marks each</p>	
	e) Ans.	<p>State the government policies pertaining to rural development.</p> <p>The Central and State Government schemes include:</p> <ul style="list-style-type: none"> i) Prime Minister's Rural Development Fellow Scheme ii) National Rural Employment Guarantee Act (NREGA), 2005 iii) Swarnajayanti Gram Swarozgar Yojna (SGSY) iv) Sampoorna Gramin Rozgar Yojna v) Deendayal Upadhyay Grameen Kaushalya Yojna 	<p>Any 2 1 mark each</p>	

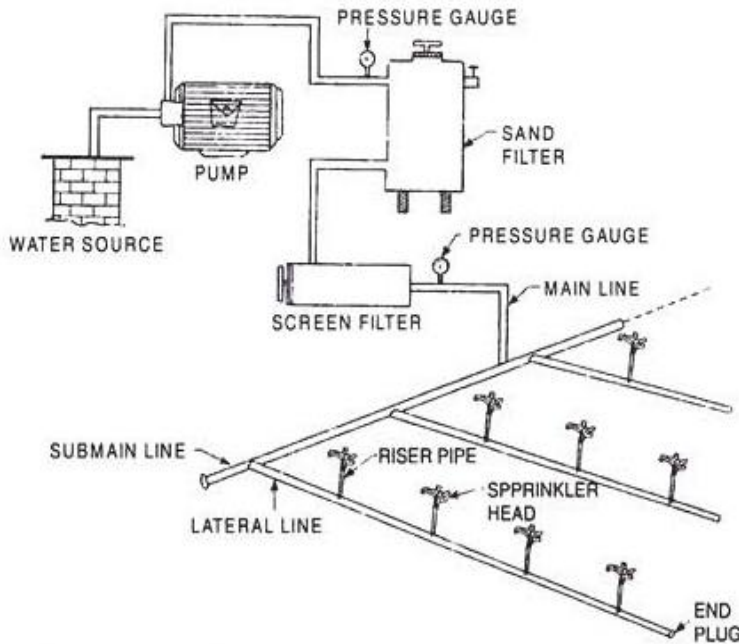
iii) Gabian structure stores water from natural streams on its upstream side and this water is used in rural areas for drinking, washing and minor irrigation purpose.



2 marks for sketch

c)
Ans.

Draw layout of sprinkler irrigation system showing various components on it



2 mark for correct sketch and 2 marks for proper labelling

4

Note: Marks should be given for any similar sketch showing all the components with proper layout



d)	Ans.	<p>Draw c/s of a rural road and suggest dimensions of various components</p> <div style="text-align: center;"> <p style="text-align: center;"> (f) Cross-section of an Other District Road or Village Road in Embankment in Rural Area </p> <p style="text-align: center;"> Note: Sketch may be drawn with dimensions or suggest separately </p> </div>	<p>2 mark for correct sketch</p> <p>and</p> <p>2 marks for proper labelling with dimensions</p>
3		<p>Attempt any THREE of the following:</p>	12
a)	Ans.	<p>State key features of Pradhan Mantri Gram Sadak Yojna.</p> <p>Key features of Pradhan Mantri Gram Sadak Yojna are:</p> <ol style="list-style-type: none"> i) Decentralized planning – Each district has been given powers under District Rural Road Plan (DRRP) to provide single connectivity to each target habitation. ii) Standards and specifications – A manual on geometric standards, design, construction and maintenance of rural roads has been published by IRC iii) Detailed project reports and scrutiny – To ensure quality output for each road, proper survey and adequate investigations are stipulated iv) Institutional arrangements – Ministry of Rural Development is the nodal ministry for the implementation of program at national level. National Rural Roads Development Agency (NRRDA) and State Rural Roads Development Agency (SRRDA) are formed for programme implementation at national and state level respectively. v) Procurement process – All works under the programme are procure and managed on the basis of Standard Bidding Document (SBD) and the entire bidding of procurement works is carried out by e-procurement. vi) Quality Assurance – A 3-tier quality management mechanism has been institutionalized vii) Maintenance – Each contract provides for defect liability of 5 years along with paid maintenance after completion of work. 	<p>1 mark each (Any four)</p>



	<p>viii) Online monitoring, management and accounting system – A web based online monitoring, management and accounting system (OMMAS) has been developed</p> <p>ix) Operations manual and program monitoring – All operations under this programme have been systematically laid down in the operations manual published in 2005</p>		
<p>b) Ans.</p>	<p>Explain working of Gobar Gas plant with a neat sketch.</p> <p>It is a type of composting plant. In this plant gobar gas is produced from solid waste which is biodegradable in nature. A mixture of gases is produced by breakdown of organic matter in the absence of oxygen.</p> <p>A Gobar gas plant has three component parts – Inlet chamber, digester and outlet chamber. Raw materials include agricultural waste, manure, municipal waste, cow dung, sewage, food waste etc. These raw materials, along with water, enter the digester through the inlet chamber. Here anaerobic digestion of all the organic matter takes place and gobar gas is formed.</p> <p>Gobar gas is primarily Methane and Carbon Dioxide. It is used as a fuel and the digested sludge is used as fertilizer for crops</p> <div style="text-align: center;"> </div> <p>Note: Marks should be given for any other similar sketch</p>	<p style="text-align: center;">2 marks for working</p> <p style="text-align: center;">2 marks for sketch</p>	
<p>c) Ans.</p>	<p>Explain Integrated Rural Energy Programme.</p> <p>It is a subsidy based scheme to benefit rural people in selected villages and promotes an optimum mix of both conventional and non-conventional energy sources. It was introduced in Planning Commission during the 7th plan. It is implemented on cost sharing basis of 50:50 between the centre and states.</p>	<p>1</p>	



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		<p>The objectives of Integrated Rural Energy Programme (IREP) are:</p> <ul style="list-style-type: none"> i) To provide for minimum domestic energy required for cooking, heating and lighting purpose. ii) To provide most cost-effective mix of various energy sources. iii) To ensure participation of people in planning and implementation of IREP plans 	3 M	
	d) Ans.	<p>Explain the Importance of national project on Biogas development.</p> <p>The National Project on Biogas Development (NPBD) of the ministry of Non-Conventional Energy Sources was started in 1982 for the promotion of family type biogas plants to provide clean alternate fuel to rural masses and enriched organic manure for agriculture. The objective of the project is to reduce the use of non-renewable fuels.</p> <p>These biogas plants are used in addition to chemical fertilizers in agricultural fields, improve sanitation and hygiene by linking toilets with biogas plants. Thus, it benefits the weaker sections of the society by solving the disposal problems of cattle waste. At the same time linking toilets with biogas plants recycles the human waste and improves sanitation.</p> <p>The NPBD has the potential for generating socio-economic benefits in the form of reduction in the use of non-renewable energy for cooking/lighting, supply of enriched biomass for agriculture increased employment opportunities. It improves quality of life for rural households.</p>	4	
4		Attempt any THREE of the following		12
	a) Ans.	<p>a) Enlist the two advantages of following:</p> <p>i) Sericulture:</p> <ul style="list-style-type: none"> 1) High Employment Potential 2) Provides Vibrancy to Rural Economy 3) Low investments, High Returns 4) Women-friendly Occupation 5) Ideal Programme for the Weaker Section of the Society 6) Eco-Friendly Properties 7) Scope for Professional Training <p>ii) Fishery:</p> <ul style="list-style-type: none"> 1) Creation of Employment in coastal regions. 2) Source of Proteins in terms of health needs. 3) High Yield. 4) Encouragement in allied industries concerned with, culturing, processing, preserving, storing, transporting, marketing or selling fish or fish products. 	1 M each for any 2	
			1 M each for any 2	



	<p>5) Growth of cottage industries in village doing business in fisheries and related aquaculture called fish farming and aquaculture.</p> <p>6) It is the source of income for gram panchayats for the rural development in India</p>		
<p>b) Ans.</p>	<p>Explain the various sources of funds for rural development.</p> <ol style="list-style-type: none"> 1) A large amount of money is required for rural development. 2) Rural development includes the funds required for agricultural development, infrastructure development, (road, electricity, markets, storage, warehouse, education, training etc.) 3) Funds for investments in rural development projects comes from two main sources: (i) Domestic, (ii) Foreign. 4) Domestic institutional is a major contribution of funds for development of rural areas. <div style="text-align: center;"> <p><u>Sources of Funds for Rural Development.</u></p> <pre> graph TD A[Sources of Funds for Rural Development] --> B[Domestic Sources] A --> C[Foreign Sources] B --> D[Institutional Sources] B --> E[Non-institution sources] C --> D C --> E D --> F[World Bank] D --> G[RBI] D --> H[IMF] D --> I[Government] E --> J[NABARD] E --> K[Co-operative Bank] </pre> </div>	<p>4</p>	
<p>c) Ans.</p>	<p>Explain the criteria of site selection for following cottage industry.</p> <p>i) Bricks Manufacturing:</p> <ol style="list-style-type: none"> 1) The ground should be plain surface. 2) The site of brick manufacturing should be connected with road for transportation of materials. 3) Good brick earth should be available near the brick manufacturing industry. 4) The site should be for basic facilities of drinking water, sanitary blocks to labours working in this industry. 5) Labours should be easily available near site. 	<p>½ M each For any 4 points</p>	

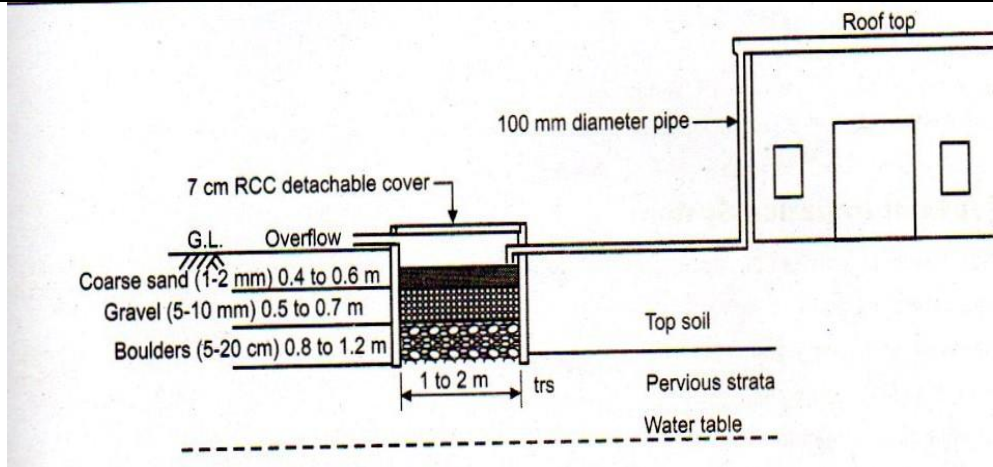


	<p>6) Brick manufacturing unit should be near to the city area where the bricks can be sold and supplied to building sites.</p> <p>ii) Artificial Sand Manufacturing</p> <p>1) It should not produce dust and should not harm to environment.</p> <p>2) Its manufacturing unit should be installed in non-residential zone.</p> <p>3) It should be in the area where raw material is available naturally.</p> <p>4) It should be well connected by road to supply sand to the site for construction of buildings, roads, dams, bridges etc.</p> <p>5) It should have sufficient space for movement of trucks, weighing of trucks and parking of trucks.</p> <p>6) It should have sufficient space for installation of crushing plant.</p> <p>7) It should have arrangement of electricity to operate crushers.</p>	<p>½ M each For any 4 points</p>	
<p>d) Ans.</p>	<p>Describe the procedure mentioned in Prime Minister Rural Development Fellow Scheme for the rural area.</p> <p>Prime Ministers Rural Development Fellows Scheme (PMRDFs):</p> <p>Procedure:</p> <p>1) The PMRD fellows are selected through a pan-India process through All India Common Entrance Test, followed by a written exam and personal interviews.</p> <p>2) During the two years of fellowship, PMRD fellows work closely with the District Collector of the Integrated Action Plan (IAP) districts in improving programme delivery and interface with the marginalized sections of the populations with the aim of reducing developmental and governance deficits.</p> <p>3) After the successful completion of the two-year fellowship, a PMRD fellow is required to spend one year in public service as a paid full-time employee of the State Rural Livelihood Mission in the state to which he/she is assigned.</p>	<p>1 M each for any 4 points</p>	



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		<p>4) The first batch had 140 fellows who were placed across 83 districts in nine states. In 2014, the fellowship was expanded to included seven more states covering N-E region as well as J & K.</p> <p>5) As the knowledge partner of MoRD, TISS (Tata Institute of Social Sciences) provides holistic support to fellows to acquire knowledge, professional skills and capabilities required to engage in transformative development work with the people, the state and non-state institutions.</p> <p>6) In order to support the fellows at the districts with their academic work, the Institute has set up PMRDF support cell in Delhi, Raipur, Hyderabad, Guwahati and Mumbai.</p>		
	e)	<p>State the necessity of planning for the development of rural area. Planning of rural development is necessary to fulfill the following activities in village area.</p> <ol style="list-style-type: none"> 1. For agriculture and development. 2. For irrigation of fields and crops. 3. For forestry. 4. For environmental protection. 5. For housing and urban development. 6. For rural roads and construction. 7. For banking and capital market development. 8. For colleges and schools for education development. 9. Market for sale of goods produced in villages. 	1 M each for any 4 points	
5		Attempt any TWO of the following:		12
	a)	<p>Illustrate the procedure of Ground water recharge pit with neat sketch. Procedure:</p> <ol style="list-style-type: none"> 1) It is adopted for buildings having roof area up to 100 sq m. recharge pit of any shape is constructed generally 1 – 2 m wide and 2 – 3 m deep. 2) The pit is filled with boulders, gravel and sand for filtration of rain water. 3) Water entering in to rain water harvesting structure should be silt free. 4) Top layer of sand of filter should be cleaned periodically for better ingress of rain water in to sub-soil. 5) This method is suitable where permeable strata is available at shallow depth 	1 M each for any 4 points	



2 M for sketch

b) Illustrate the “Contour bund” and “Farm pond” with neat sketch.

Ans.

Contour Bund:

- 1) Contour bunds are effective methods to conserve soil moisture in watershed for long duration.
- 2) Contour bunds are suitable in low rainfall areas where monsoon run-off can be impounded by
- 3) constructing bunds on the sloping ground all along the contours of equal elevation.
- 4) Flowing water is intercepted before attains the erosive velocity by keeping suitable spacing between the bunds.
- 5) Spacing between two contour bunds depends on the slope, the area and permeability of the soil.
- 6) If permeability of the soil is less, then spacing of bunds is kept less.
- 7) Contour bunding is suitable on lands with moderate slopes without involving terracing.

½ M each for any 4 points

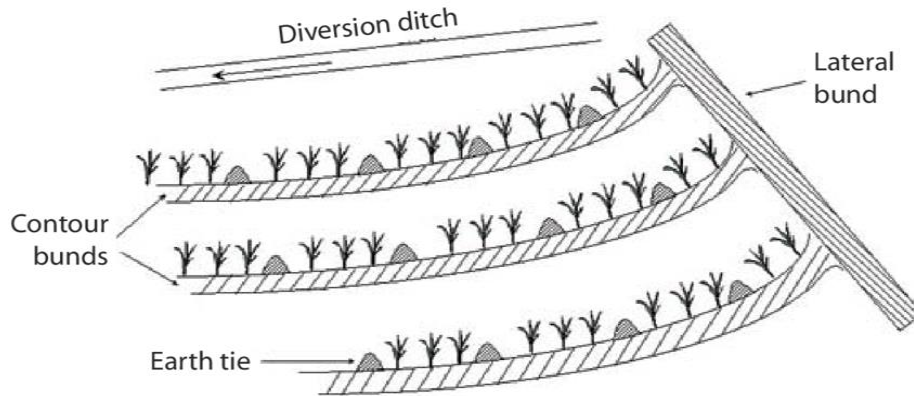


Fig: Contour Bund

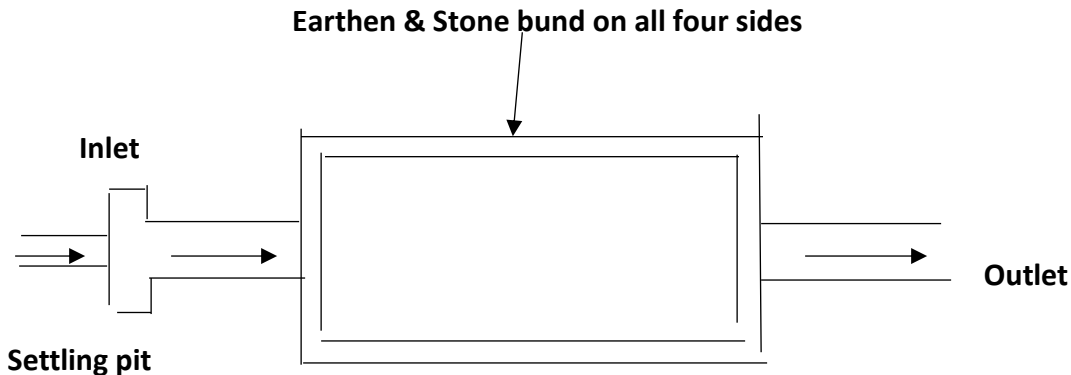
1 M for sketch



Farm Pond-

- 1) A farm pond is a large hole dug out in the earth. It is square or rectangular in shape.
- 2) It harvests rain Inlet water and stores it for future use.
- 3) It has an inlet to regulate the inflow and an outlet to discharge excess water.
- 4) The farm pond is surrounded by a small bund which prevents erosion, on the banks of the pond.
- 5) Ideally, the farm pond should be dug in to the ground in a naturally low lying area.
- 6) Some of the soil that is removed for digging the pond can be used to construct an earthen berm around the pond. Trees can be planted on this earthen berm for stability.
- 7) Greater depth of the pond and less surface area will also reduce evaporative losses. However, depth of pond shall not be more than 5 m, else the cost of excavation will increase.
- 8) A small settling at the inlet will help to remove silt and the whole pond can be cleaned more easily.
- 9) The sides of pond should be sloped for stability.

½ M
each for
any 4 points



1 M
for sketch

c) **Explain the low-cost housing model for a rural area.**

Ans

Low cost housing model:

Purpose: A cost effective, affordable and eco-friendly housing system including, low cost house & sanitation system with implementation of biogas system which will decrease air pollution and drainage problem.

A large section of Indian population lives in villages and is mainly engaged in agriculture. They belong to weaker section of the society.

Phases in low cost housing model:

- 1) Material collection regarding low cost construction work.

2 M



		<p>10) Provide healthy living programmes: Start early to create and maintain consistent structure for healthy living programmes i.e. exercise, food, stress reduction, preventive healthcare. Provide apprenticeships</p> <p>Note: Marks to be given for any of the above answer.</p>		
6	<p>a)</p> <p>Ans</p>	<p>Attempt any TWO of the following:</p> <p>Explain the main features of National Rural Development Guarantee Act, 2005.</p> <p>Main Features of this Act are as follows:</p> <ol style="list-style-type: none"> 1) Rights based framework for the adult members of a rural household willing to do unskilled manual work. 2) Time bound guarantee: Employment to be provided within 15 days or else unemployment allowance to be paid. 3) Employment upto 100 days in a financial year per household depending upon the actual demand. 4) Labour-intensive works, 60 : 40 wage material ratio for permissible works at Gram Panchayat with no contractors or machinery. 5) Decentralized planning. 6) Gram sabhas to recommend works. 7) 50% of the works to be done by Gram Panchayats for execution. 8) Principal roles of PRI (Panchayati Raj Institutions) for planning, implementation and monitoring. 9) Work-site facilities: Creche, drinking water, first aid and shade should be provided at work sites. 10) Women Empowerment: At least one-third of the beneficiaries should be women. 11) Transparency and accountability: Proactive disclosure through wall writings, citizen information boards and MIS and social audits. 12) Funding: 100% cost towards unskilled wages, 75% towards skilled, semi-skilled and material to be borne by Central Government and 25% of skilled, semi-skilled and materials costs is contributed by states. 13) Financial inclusion of the poor: With an aim to universalize the system of wage payments through institutional accounts, it is recommended for all states to disburse wages through post offices and banks. 	<p>1 m each for any 6 points</p>	12
	<p>b)</p>	<p>Describe the levels of planning with their function.</p> <p>Planning can be carried out at:</p> <ol style="list-style-type: none"> 1. National and State levels (Macro-level). 2. The individual unit of production (Micro-level). 3. Intermediate level (Meso level). <p>1. National and State levels (Macro-level):</p>	1	



c)	<p>Explain “Decentralization policy of planning”.</p> <ol style="list-style-type: none">1) Due to different agro-climatic, techno-economic and socio-culture factors occurring in the different regions of India, national planning to be realistic and effective has to be de-centralized to state and district levels. It is a logical step for democracy.2) This is a movement which permits the wider involvement of people in the process of planning and implementation and' reduces the discrepancies between the national, state and district level plans that arise from regional or area difference.3) The need for de-centralization was felt during the Fourth Five Year Plan and modest beginning was made in the direction of extending planning to the state, regional and district levels.4) In the year 1969, the Planning Commission gave detailed instructions to the state governments as to how to formulate district plans.5) In November 1977, the Planning Commission appointed a working committee to draw guidelines for block level planning.6) This committee submitted its report in 1978' that emphasized the need for strengthening the planning team at the district level and for integration of the block plan with the district plan.7) There have been quite a few attempts by the state governments and other organisations to frame block level plans. Having taken the cognizance of all these efforts, planning commission issued guidelines" for block level planning.8) These guidelines were very preliminary in nature and covered only some essential aspects of block level planning.9) In 1980, the Ministry of Rural Development prepared a 'Manual on Integrated Rural Development" that included procedures and formats for preparing household, village and block plans.10) In 1982, the Union Ministry of Rural Development in consultation with the Planning Commission, state governments and other organizations involved in rural development prepared a manual 'operational guidelines for block level plans for the Integrated Rural Development Programme.11) The block level perspective plans were to be aggregated at the district level based on the practical possibilities of development in all sectors.12) The IRD or the Integrated Rural Development block plan was to be integrated with the development programme of the other departments.	<p>1 M each for any 6 points</p>	
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