

INTERACTIVE LEARNING PROGRAMME
0 Special Classroom Program () Distance Learning Program [ STUDY MATERIAL $\&$ MAINS TIEST SERIES ] (Expert Guidance, Feedback \& Discussion)
\# General Studies \# Sociology
\# Geography
\# Hindi Lit.
\# Public Administration
\# Psychology
\# Essay Enrichment Programme
\# Interview Enrichment Programme

1. Answer any two of the following in about 250 words each

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20 \times 2=40
$$

(a) List the Central Asian Republics and identify those of particular strategic and economic importance to India. Examine the opportunities and bottlenecks in enhancing relations with these countries.
(b) Critically examine the security and strategic implications of the so-called 'string of pearls' theory for India.
(c). "Compared to the South Asian Free Trade Area (SAFTA), The Bay of Bengal Initiative for Multi sectoral Technical and Economic and Economic Cooperation Free Trade Area (BIMSTEC FTA) seems to be more promising." Critically evaluate.
2. Answer any three of the following in about 150 words:

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12 \times 3=36
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(a) Subsequent to the Nuclear Suppliers' (NSG) waiver in 2008 , what are the agreements on nuclear energy that India has signed with different countries?
(b) Trace the progress of India's efforts for a joint counterterrorism strategy with China. What are the likely implications of the recent Xinjiang violence on these efforts ?
(c). Bring out the importance of the "Small and Medium Enterprises Expo and Conference' held in Dubailast year for Indian business.
(d). What are the salient features of the political and economic relationship between India and South Africa ?
3. Answer any one of the following in about 250 words
(a) "The causes and implications of the Jasmine Revolution and its spread are as much economic in nature as they are political. " Critically evaluate.
(b) In the context of the 'Euro-zone' debt crisis, examine the proposed 'six-pack' solution. Do you think this has a better chances of succêss than the earlier Stability and Growth Pact?
4. Answer any four of the following in about 150 words
$12 x 4=48$
(a) "As regards the increasing rates of melting of Arctic ice, the interests of he Arctic Council nations may not coincide with those of the wider world. "Explain..
(b) Is there still a role for the balance of power in contemporary international politics? Discuss.
(c) "Strategic interests seem to be replacing commercial interests for the host country with regard to Cam Ranh Bay. " Amplify.
(d) To what extent has the withdrawal of al-Shabab from Mogadishu given peace a real chance in Somalia? Assess.
(e) On a Formula-one (F-1) racing car track, information to drivers is generally signaled through the standardized use of flags of different colors. Describe the meanings associated with any six of the flags listed below:
(i) White flag
(ii) Black flag
(iii) Yellow flag
(iv)Blue flag
(v) Black and White flag divided diagonally
(vi)Chequered flag
(vii)Yellow and red striped flag

## 5. Comment on any thirteen of the following in about 50 words

 each:(a). International year of Chemistry
(b) The scourge of e-waste
(c). ‘Designer’ poultry eggs
(d). INSPIRE programme of the Department of Science \& Technology
(e). The ' Kessler Syndrom' with reference to space debris
(f). Omega -3 Fatty acids in our food
(g). Difference between ' spin - drying' and 'tumble - drying' technology with the reference to drying of washed clothes.
(h). The diminishing population of vulture
(i) ' Arsenic bug' and the significance of its discovery
(j) F-22 ' Raptor' aircraft
(k) ' Concentrated' solar energy and ' photovoltanic' solar energy
(I) Analog, Hybrid and IP system of CCTV technology
(m). Various Application of Kevlar
(n). Difference between Compact Disc (CD), Digital Versatile

Disc (DVD) and Blû-ray Disc

## 6. Comment on the following in about 50 words each:

(a). Functions of the world Customs Organization ( WCO )
(b). Success of international intervention in Cote d'lvoire ( Ivory Coast)
(c). Strategy adopted by Colombia to eliminate its drug cartels
(d). World Food Programme ( WEF) of the United Nations
(e). Sculpture of the broken chair in front of the UN building at Geneva

## 7. Why have each of the following been in the news recently?

(Each answer in a sentence or two only ).
$2 \times 10=20$
(a) Tiangong - 1
(b) K - Computer
(c) Gliese 581 g
(d) Mabel robot
(e) 'Operation Shady Rat'
(f) 'Saga - 220’
(g) ' Billion Act of Green'
(h) L'Aquila earthquake
(i) OPERA detector at Gran Sasso
(j) Saturn's Titan
8. Why have the following been in the news recently? ( Each answer in a sentence or two only ).

9. (a) List the requisites of a good table.

Present the following in a suitable tabular form:
In 1980 out of total of 1750 workers of a factory, 1200 were members of a union. The number of women employed was 200 of which 175 did not belong to the union. In 1985 the number of union workers increased to 1580 of which 1290 were men. On the other hand the number of non-union workers fell down to 208 of which 180 were men. In 1990 there were $1800^{\prime}$ employees who belong to the union. Of all the employees in 1990,300 were women of which only 8 did not belong to the union.
(b). Draw an ogive for the following distribution. Read the median from the graph. How many students get between 60 and 72 ?

| Marks | No. of Students |
| :---: | :---: |
| $50-55$ | 6 |
| $55-60$ | 10 |
| $60-65$ | 22 |
| $65-70$ | 30 |
| $70-75$ | 16 |
| $75-80$ | 12 |
| $80-100$ | 15 |

(c) From the following data calculate the missing frequency.

| No. of tablets | No. of persons cured |
| :---: | :---: |
| $4-8$ | 11 |
| $8-12$ | 13 |
| $12-16$ | 16 |
| $16-20$ | 14 |
| $20-24$ | $?$ |
| $24-28$ | 9 |
| $28-32$ | 17 |
| $32-36$ | 6 |
| $36-40$ | 4 |

The average number of tablets to cure fever was 19.9
(d). Life time of 400 tubes tested in a company is distributed as follows:

| Life-time ( Hours ) | No. of tubes |
| :---: | :---: |
| $300-399$ | 14 |
| $400-499$ | 46 |
| $500-599$ | 58 |
| $600-699$ | 76 |
| $700-799$ | 68 |
| $800-899$ | 62 |
| $900-999$ | 48 |
| $1000-1099$ | 22 |
| $1100-1199$ | 6 |

## Determine :

(i). Relative frequency of sixth class
(ii). Percentage of tubes whose life time does not exceed 600 hours
(iii). Percentage of tubes whose life time is greater than or equal to 900 hours.
(iv). Percentage of tubes whose life time is at least 500 but less than 1000 hours .
10. (a)A car travel 25 Km at $25 \mathrm{Kph}, 25 \mathrm{Km}$ at 50 Kph and 25 Km at 75 Kph . Find the average speed of the car for the entire journey.
(b). The mean of 200 items was 50 . Later on it was found that two items were wrongly read as 92 and 8 instead of 192 and 88 . Find the correct mean.
(c). Students were asked how long it took them to walk to school on a particular morning. A cumulative frequency distribution was formed.

| Time taken ( minutes ) | c.f. |
| :---: | :---: |
| $<5$ | 28 |
| $<10$ | 45 |
| $<15$ | 81 |
| $<20$ | 143 |
| $<25$ | 280 |
| $<30$ | 349 |
| $<35$ | 374 |
| $<40$ | 395 |
| $<45$ | 400 |

(i). Draw a cumulative frequency curve
(ii). Estimate how many students took less than 18 minutes
(iii). $6 \%$ of students took x minutes or longer. Find x .

