

## GENERAL STUDIES (Test Code : 306)

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Schedule:        Module:  

Place: Jaipur      Time:        Date: 11-Nov-2013

Classroom:        Distance Learning:       Classroom & Distance Learning:  

### INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1.(a)	20	
1.(b)	20	
1.(c)	20	
1.(d)	20	
1.(e)	20	
2.(a)	15	
2.(b)	15	
2.(c)	15	
2.(d)	15	
2.(e)	15	
2.(f)	15	
3.(a)	10	
3.(b)	10	
3.(c)	10	
4.(a)	5	
4.(b)	5	
4.(c)	5	
4.(d)	5	
4.(e)	5	
4.(f)	5	

Maximum Marks : 250

131 /250

Remarks:

*S.S. Pandey*  
Signature of Examiner

### EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

### INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, ID Number and Test Code).
2. Candidates should attempt answer to the part/sub-part of a question strictly within the pre-defined space. Any attempt outside the pre-defined space shall not be evaluated.
3. The candidate need not write anything in his/her answer that derogates the dignity of an individual or an organization.
4. Candidates should attempt all questions strictly in accordance with the instruction given under each question.
5. The candidate should respect the instructions, given by the invigilator.

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75, 3<sup>rd</sup> Floor, Old Rajinder Nagar Market, Near Axis Bank, New Delhi - 110060

*SHP.*

**GENERAL STUDIES (Test Code : 306)**

Overall Macro comments / feedback / suggestions on Answer Booklet:

1.

good

2.

keep it up

3.

All the best

4.

5.

All The Best

1. (a) US Supreme Court has ruled that patents cannot be awarded for something as fundamental to nature as DNA. Explain how the decision has removed a major barrier to patient care and medical innovation? 20

Patents ~~cannot~~ <sup>should</sup> be awarded in only significant and novel innovations. Keeping this in mind, the US Supreme Court held that Myriad cannot patent the BRCA1 & BRCA2 genes. It can only patent the cDNA.

#### IMPLICATIONS FOR MEDICAL INNOVATION

- Allowing the patent would have meant that no one else could have studied the patented gene without prior consent from Myriad. This would have dealt a severe blow to innovation.

- Patent would have meant no one else could have designed any other tests to detect the mutations in the patented gene.
- This would have kicked off a race where every human gene would be patented. Let us not forget, the human genome project, which was a great contribution to science, didn't patent any gene.

#### IMPLICATIONS ON PATENT CARE

- This would make the tests for the mutation of the said gene more widely accessible and affordable. This is because no single company can have monopoly and other



companies can come up with  
alternative & cheaper test.

patients would benefit from greater  
choice & faster innovation.

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1. (b) What is the rationale behind providing the status of 'Special Category States' for planning purposes? In this context discuss the recommendations and implications of Raghuram Rajan Committee's report. 20

special category status is given to  
states which due to their difficult  
geography, long & troublesome borders  
or other special problems like lack  
of <sup>resources</sup> tax capacity, large ~~total~~ population  
cannot rely on their own finances  
to meet their developmental needs.

They get allocation out of 25% according to budget formula of the central funds from planning commission.

- Recently many states were asking for this status eg. Bihar.

### RECOMMENDATIONS OF RAJAN COMMITTEE

1. Each state be given a basic grant of 0.3%.
2. out of remaining 31.4%, 75% of it should be given on basis of need and 25% on basis of performance.
3. Need should be calculated on the basis of a backwardness index comprising of equally weighted 10 indicators
  - per capita monthly consumption
  - literacy - share of SC/ST population
  - financial inclusion - asset quality

- poverty ratio - malnutrition  
- infant mortality rate
4. States scoring  $>0.6$  on the index are most backward and may be given other assistance. Between 0.4 and 0.6 are less developed & below 0.4 are relatively developed.
5. Performance is calculated on basis of improvement in the index score.

### IMPLICATIONS

1. Majority of the states are set to lose out on Planning Commission allocations, specially the hilly & North East states.
2. The index better captures level of development in HDI and hence has moral justification.
3. Large states like Bihar, Odisha, UP are set to gain most.
4. Will make smaller states more vulnerable.

Refer  
model  
answer  
book  
① better  
content

1. (c) Discuss the crucial issues, which hold relevance for the evolving banking structure in India.

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As per RBI working paper and other sources, following issues are important

1. Basel Norms & financial stability : RBI

has mandated adherence to Basel 3 norms + 1% extra equity. This would

put pressure on banks to raise more equity. <sup>Other requirements like</sup> ~~the stringent~~ <sup>need</sup>

liquidity ratio, 3% leverage, long

~~term~~ funding ratio are manageable.

2. Govt. Ownership of PSBs : The financial

crisis has taught us the ~~importance~~

~~of~~ ~~govt~~ ~~ownership~~ ~~of~~ ~~public~~ ~~sector~~

banks. Yet, the expansion requirements

& Basel 3 put pressure on public



banks to raise more equity this requires govt to contribute as well if it wants to retain 75% share. But this leads to fiscal deficit. Other options such as non voting shares or holding company plan may be explored.

3. Mergers & Acquisitions: large banks are needed for scale economies, better regulations. But these mergers should be based on synergies and not forced (specially on PSBs). Also small banks are needed to reach out to small areas and niche segments.

4. Foreign banks: They should be encouraged to expand but with

safeguards. RBI has given them <sup>near</sup> ~~more~~ national treatment upon complete subsidisation.

5. Financial Inclusion: New models need to be adopted like Business Correspondents. Credit needs to be extended to MSMEs as well maybe by leveraging technology to cut cost like Kisan credit card in agriculture.

1. (d) Discuss FSLRC's recommendations on the current regulatory architecture in India and the proposed implementation of its suggestions on consumer protection by RBI.

20

FSLRC, under Justice ~~Sastry~~ Krishna was tasked to review whole financial sector regulations and regulatory structure.

### RECOMMENDATIONS ON ARCHITECTURE

It <sup>is</sup> recommended abolition of present sector specific regulators. One of the big reason is regulatory arbitrage and turf wars. This is a welcome move.

good (10)  
add but  
issues &  
ways out

- Instead it proposes a Unified Financial Authority (UFA) to regulate all financial sectors except banks & payments systems.
- RBI will continue to set monetary policy and regulate banks and payments systems.
- But power of RBI governor & independence of RBI will be severely curtailed even in monetary policy.
- Statutory powers to Financial Stability & Development Council (FSDC) to be headed by finance minister.
- Financial Appellate Tribunal to hear complaints against all regulators.
- Financial Redressal Agency to hear consumer complaints against all

financial sector do greatly help consumers

- A Public Debt Management Agency to manage govt debt. Presently RBI does it. This would avoid RBI's conflict between monetary policy & debt management.
- A resolution corporation for winding up financial companies protecting small investors. It will also subsume deposit insurance. This would protect consumers.
- These are expected to substantially remove financial frauds. <sup>But it gives too much</sup> ~~to help the sector meet~~ challenges of future. power to the govt.

### RBI'S IMPLEMENTATION

- RBI will issue guidelines for capacity building, certification for jobs in financial sector. It would also see whether its own public facing services can be offered in a time bound manner.
- The FSRC recommendations include putting the responsibility on financial companies to protect small investors.

for  
more  
content, refer  
model  
answer  
10



1. (e) What do you understand by biodiversity offsetting? Critically evaluate its success. 20

Biodiversity offsetting model means if a project destroys the biodiversity of a particular area then it can compensate for development of biodiversity in another area.

- The CAMPA funds mechanism can be seen as a variant of this as the companies who use the forest land for non forest purposes must now pay for the compensatory afforestation.

#### POSITIVES OF THE MODEL

- This model allows development to coexist with environment.

- This model makes the companies destroying biodiversity pay for the destruction. Doesn't let them go scotfree.
- The world as a whole accepts as development can be achieved without biodiversity loss.

#### NEGATIVES OF THE MODEL

- This is yet another play by the wealthy to destroy the environment. It is well known that the amount of compensation or the standards of reforestation can be manipulated by them in their favor.

- Biodiversity and ecosystems are closely interlinked. All these linkages cannot yet be understood. The replacement, thus, could be of an inferior quality and devoid of some vital initial linkages.
- It may even perish or degrade after few years. Who would be accountable?

Give  
specific  
components,  
refer model  
answer

8

2. (a) Explain the need and recently faced challenges of Deep Web. 15

- Deep web is that portion of internet which can't be accessed even by search engines like google.
- It consists of the dynamically created pages (say in response to a search query) or restricted pages.
- Its size is estimated to be much bigger than the 'surface' web.

NEED FOR DEEP WEB

- Deep web, when used with special software like TOR (The Onion Router) can guarantee almost complete anonymity to the user.
- In the age of massive NSA & other state led surveillance, it is very useful. It is also useful for journalists, political dissenters, researchers etc.

CHALLENGES

- The near anonymity also creates its the disadvantages. It is extensively used by drug traffickers, child pornography, terrorists etc.
- The recent expose of the "Silk Road"



shows how when used with  
bitcoin, deposits can lead to  
serious proliferation of illegal  
business activities.

- Perhaps a mechanism needs to be evolved where its use can be restricted to protect legitimate activities and privacy only.

2. (b) The Ministry of Environment and Forests (MoEF) has adopted a confrontationalist approach with the National Green Tribunal (NGT). Trace the reasons for this conflict and its implications. 15

The most recent case of this conflict relates to the NGT order of banning all sand mining in the country. (earlier cases were notification of ESAs)

Earlier the MoEF had conducted a study on illegal sand mining and found that it was rampant

8  
good

in country's alluvial river basins, specially Yamuna. This sand is used in building material. The Supreme Court asked to stop it and mandated that MoEF approval should be needed for sand mining. MoEF didn't take any action, so NGT now banned all sand mining without MoEF approval.

- MoEF pleads that at least for small mining leases (< 4 hectares), permission should be given at state level as it doesn't have the resources to process so many requests.

#### IMPLICATIONS

- This has put an upward pressure

- on sand prices & increased demand -  
supply gap. Small miners & consumers suffer  
most.
- Irony is, only legal mining has  
been stopped and illegal miners are  
happier given higher sand prices.
- Development vs. environment questions  
shouldn't be settled in extreme positions.
- Bad also because it increases the  
tensions between executive & judiciary.

2. (c) "In a globalised society media becomes a lethal weapon against the enemy and the populace as well." Discuss. 15

In the globalised society, people's  
connections and interdependences have  
grown. Media, including social, media  
become important here as they amplify  
these connections & dependencies.

Media can be used against enemy

- As shown in Arab Spring, the  
media (specially social) can be used

Add more  
on  
implications  
refer  
model  
answers

by foreign powers to put the citizenry against its govt.

- The New York Times article by Putin to US public helped build pressure on the US govt not to attack Syria.
- Social media has been used by Pakistan to promote communalism in India & incite riots.
- USA's PRISM program shows how it uses internet to spy on everybody.
- Media <sup>can be</sup> is a lethal weapon against the populace as well.
- Various news channels today are running into loss and receive funding from opaque sources (as per TRAI). This easily puts them in control of vested interests who want to



- put out their own biased propaganda.
- Media can quickly spread the word.
  - Youtube videos can go viral leading to widespread violence eg anti-Islam videos.
  - Paid news, biased reporting etc. are other vices by which media can be used to spread false information among public.

good  
9

2. (d) Monitoring social networking sites, phone tapping etc. are an infringement on the privacy, but need of the hour in wake of the recent domestic scenario. Examine. 15

- Surveillance programs like PRISM and India's own CMS (Central Monitoring system) are gross violation of privacy.
- They violate Supreme court's guidelines on phone tapping (permission from home secretary, review by a higher board in 2 months, maximum period of 6 months).
  - Supporting govt. argue that they are

- needed to combat terrorists. Lots of lines can be saved this way.
- This is justified, but such wide surveillance also can be misused easily. The govt. can use it to silently prosecute individuals who don't agree with its ideology. Our own record is not too good given all the facebook / twitter arrests and sec. 66A of IT Act.
  - The massive surveillance is also a disproportionately large action against the threat. Billions of users are monitored. Action taken / force used should be proportional to the threat perceived is a golden rule.
  - The process is also outside any

accountability mechanism it is shrouded by secrecy, has no parliamentary oversight mechanism. In such a case, it becomes so easy to misuse it.

- Thus, it can endanger democracy itself. So adequate checks and safeguards must be maintained.

2. (e) What are the characteristics of hazardous wastes and the problems caused by it? 15

Hazardous wastes can be of many types as follows:

1. toxin wastes containing heavy metals like Mercury, lead, cadmium. They are released by a host of industries like power plants, light bulbs, medical equipment. A problem with them is that they persist in the food

chain and get amplified. Higher concentrations lead to nerve damage, respiratory and cardiac issues. Even incineration of the garbage doesn't destroy them & they get released in the air as studies around the Okhla plant have shown.

2. Nuclear waste is radioactive and contains Caesium, depleted uranium & other matter. It has half life of many years (even longer!) and thus has to be deposited deep inside the earth. A leakage may contaminate the water & air and can cause cancer, death, mutation.

3. Medical / bio waste: These contain the discharge from hospitals & manufacturing

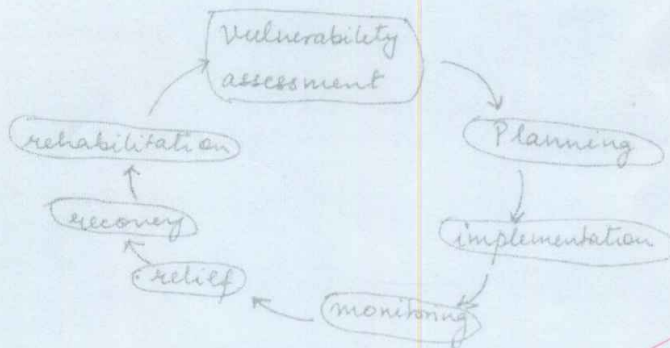


plants. It may run off with water, lead to eutrophication & development of anti-biotic resistance in bacteria. It poses direct threat to people who come in contact.

4. e-waste: It contains many harmful rare earth metals which can cause multiple diseases. May also propagate in food chain.

2. (f) Explain the Disaster Management Cycle.

15



Disaster Management cycle

It follows the proactive approach of Hyogo framework and is reflected in the Disaster Management Act, 2005.

1. Vulnerability assessment: This is the first stage and the ~~the~~ probability of a hazard and the destruction to society when it happens has to be estimated. This has to be done at district level by DDMA.
2. Planning: Plans for each area have to be developed to minimise the vulnerability. They are integrated into developmental plans. This is done at district level & integrated into state & then national plan.
3. Implementation & monitoring: Here the community participation & empowerment is a must. Early warning system, shelter homes, zonal plans, land use restrictions, emergency manuals, capacity building are the focus.
4. Relief: When the disaster strikes, immediate relief needs to be dispatched. This

is best done at ground level & collector  
in in charge.

5,6 Recovery & Rehabilitation: lessons have to  
be learnt from the disaster & must be  
shown in the vulnerability <sup>analysis</sup> ~~planning~~,  
planning & implementation for the next  
disaster so that we are better prepared.

good  
9

3. (a) List out some key provisions of the proposed Biomedical and Health  
Research Regulation Bill, 2013. 10

It seeks to reduce unethical practice  
in clinical trials in India \$400 million  
industry, but marred in controversy.

- It creates Biomedical & Health Research  
Authority. All ethics committees will  
have to register with it & it can  
supervise them.
- It gives statutory backing to the

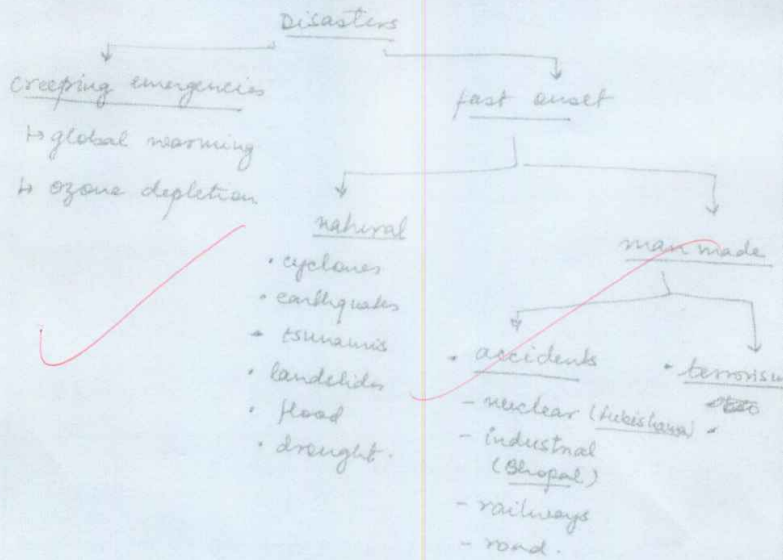
- ethics guidelines in clinical trials.  
This will enforce ~~strict~~ compliance.
- It makes consent of the individual mandatory. It has to be voluntary and recorded.
  - The ethics committee must pay fair compensation in case of death/injury.
  - The ethics committee & investigator will take adequate steps to ensure protection of the vulnerable groups.
  - Biobanking will not be allowed. The secrecy of an individual will be maintained so that his identification is not possible.

6  
good



3. (b) Identify the different conceptual categories of disasters.

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The above figure shows various categories of disasters.

- They may be fast onset like earthquakes or we may realise their impact only slowly like climate change. The latter are also called creeping emergency.
- They can then be further divided into natural or manmade.
- But this distinction is not water tight and many so called 'natural'

5  
disasters can have substantial man made component. eg. Uttarakhand floods due to unplanned development, deforestation, blasting of hills, dams, climate change.

- even man made events like Subishima disaster can be triggered by natural causes such as tsunami & earthquake

3. (c) Enumerate the important features of the National Cyber Security Policy 2013. 10

Refer model answer  
Currently India lacks good cyber security capability with only 500 odd personnel in govt. sector for this.

- the policy aims to increase technical resources & manpower, train them and thus enhance cyber security.

- for this, private sector would be encouraged to partner with govt.

- A National Critical Infrastructure

- Protection Centre under NTRC would be established. It would be tasked with protecting key infrastructure.
- CERT-In would have overall responsibility of responding to cyber threats
  - International cooperation would be enhanced by signing MoUs with multiple countries
  - Govt. would be allowed access to all internet / phone data. This <sup>could be</sup> India's counterpart of PRISM.
  - Data privacy, identity security would be enhanced.
  - It calls for promoting awareness, information sharing and capacity building.

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4. (a) Voyager-1

5

Nasa's probe launched in 1978 has now gone beyond the solar system. It is now surrounded by the inter-stellar plasma. 1<sup>st</sup> man made object to do so. It also carries a message from humanity for aliens should it encounter one.

4. (b) JENVAC

5

Japanese Elephantine vaccine is the vaccine developed indigenously in India against JE. Earlier vaccines were imported from China. JENVAC was developed in PPP mode and would be used in immunisation programme.



4. (c) Li-Fi

5

This uses light in visible spectrum from LEDs to transfer data instead of radio waves used in wifi. This is much faster than wifi and is many times cheaper and also secure since it cannot penetrate through walls. The heat generated is also less.

4. (d) Crowdsourcing

5

This refers to phenomenon where the ideas, data are all sourced from common public. eg. Google's community mapping initiative; AAP drafting 70 manifestos using public inputs.

This is cheap, dynamic & very effective but a challenge is in ensuring the objectivity & reliability of data.

4. (e) H7N9

5

3

This is the new and more deadly form of swine flu to hit, in China. It is more likely to spread and cause harm among humans than earlier swine flu. China has agreed to share its data with WHO to make vaccines & medicines.

4. (f) Bitcoin

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3

This is an online, algorithm generated currency, not controlled by any central bank. A total of 2.1 billion bitcoins <sup>will</sup> exist and the production will decline every year. The anonymity makes it very popular among drug dealers & other illegal businesses, as the recent "silk road" scandal highlighted.