

TOPICS ON SAFETY PRINCIPLES FOR ENGINEERS BM 330N

MAJOR

Friday 6 May 2005

10:30-12:30

TOTAL MARKS - 35

NAME.....

ENTRY NO.....

- a. This is an open book examination. You may consult any papers/books in your own possession. You may not consult or take papers from any one else. Please sign below to indicate that you agree to abide by these rules.

.....(signature)

- b Your answers must be brief and to the point. Answer on these sheets in the space provided. No extra paper will be given.

Question 1

10 Marks

- a. Give 5 reasons why education and propaganda is generally not very effective in changing people's behaviour in observing safety instructions.
- b. Are there any situations where safety education may be effective? List them with reasons.

Question 2**8 Marks**

The Indian army airlifted jawans from Chakrata in UP (2,000 m above sea level) to Western Rajasthan for a military exercise involving heavy work 8 hours a day. The daytime temperatures vary between 40 and 45 degrees C.

- a. First write the heat balance equation for the human body and explain the terms.
- b. On the first day the Major incharge ordered 50 of the soldiers to flatten out a sand dune where there was no shade, and relative humidity was 5%. Describe the body reactions to this heavy work and what you think would happen to the soldiers.
- c. If you were incharge, how would you have approached this task?